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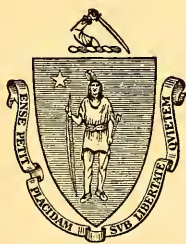


The Massachusetts Nautical Training Ship "Ranger" leaving Boston Harbor on the Summer Cruise.

TWENTY-FIRST ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
TRAINING SCHOOL.

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JANUARY 1, 1913.



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COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL TRAINING SCHOOL,  
2A PARK STREET, BOSTON.

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JOHN F. MERRY, *Chairman.*

REAR ADMIRAL, U. S. N. (RETIRED).

HON. JOHN READ, LATE U. S. N.

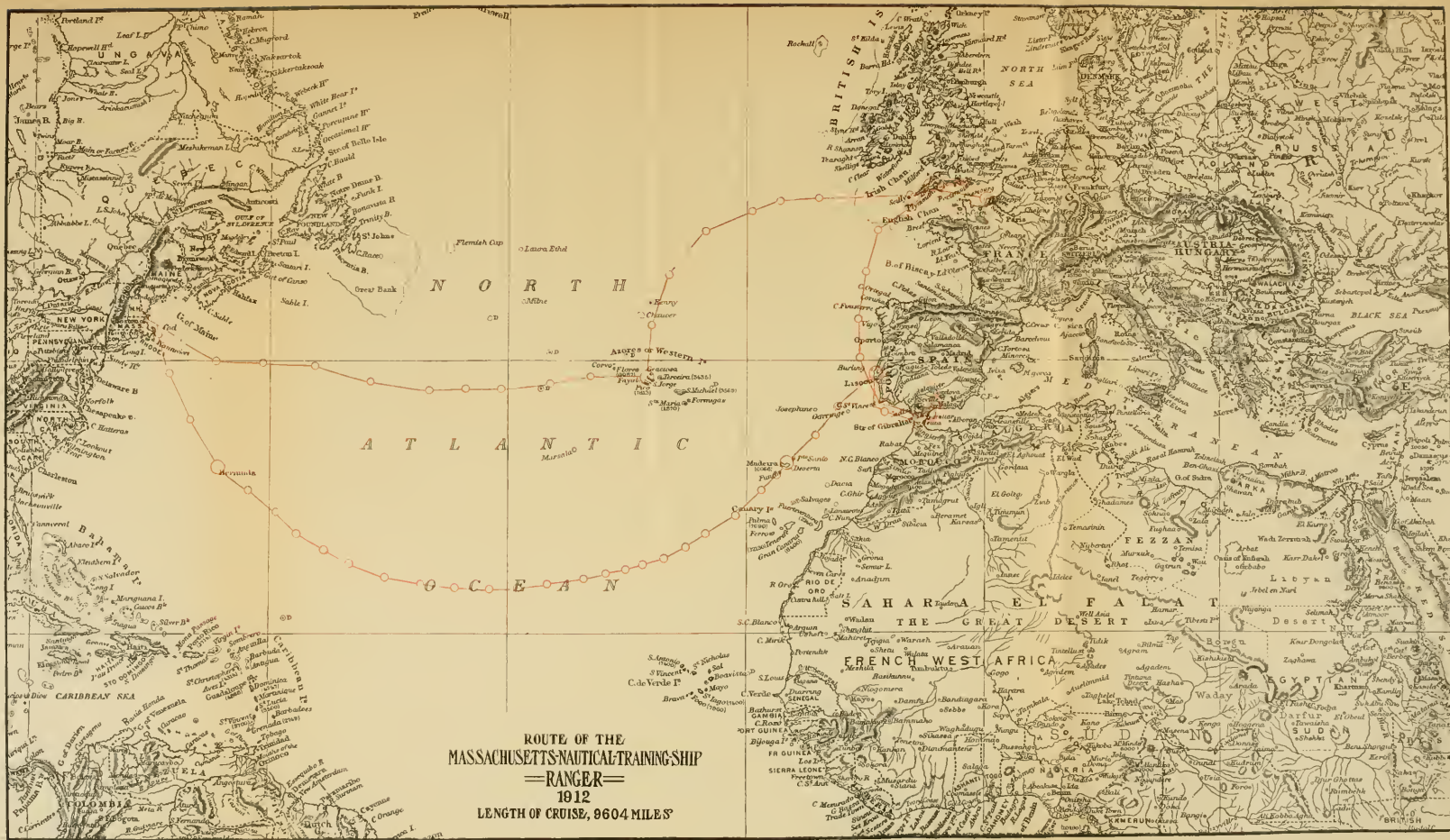
WILLIAM E. MCKAY.

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WILLIAM H. DIMICK, *Secretary.*









# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL TRAINING SCHOOL.

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*To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled.*

The commissioners have the honor to submit their report of the operations of the school for the year 1912.

### THE WORK IN GENERAL.

The work of nautical education in Massachusetts, now in its twentieth year, continues with good success. The school has been maintained at a high standard, and the results are more encouraging than ever before in its history. A greater interest in nautical education is being manifested, not only in seaport towns but in every section of the State, and the school was readily filled with a full complement of cadets in the spring and autumn. The expectation of a substantial increase in American tonnage upon the completion of the Panama Canal has quickened the interest in the work.

There is each year a larger demand for trained officers as our tonnage increases; the outlook at the present time in the shipping industry is especially encouraging to young men entering upon a seafaring career. The successful operation of the Panama Canal will aid in rehabilitating the American deep-sea shipping. The Atlantic ship yards are at present busier than they have been for years in the construction of freight and passenger steamers, most of them destined for the Canal trade. Earnest, ambitious young men, with an aptitude for the sea, will, during the next few years, find the American mercantile marine a service worthy of their best endeavors.

The "Ranger" was docked at the Boston Navy Yard in April and such repairs made as were necessary to place the ship in good condition for the work of the summer. A Marconi wireless telegraph outfit of the latest design was installed for the cruise. The commissioners have recently received from the Navy Department a radio set for permanent installation.

The commissioners express their appreciation of the valuable assistance rendered by the Directors of the Port of Boston on dredging at the berth of the "Ranger," North End Park.

The medical officer of the ship has explained the work of the school, with the aid of stereopticon pictures, before the pupils of many of the high schools of the State, and before other organizations.

During the year a graduate of the school was appointed captain of the second largest American ship afloat, an ocean liner of 13,658 tons. As the first class was graduated in 1895, seventeen years ago, the commissioners are gratified that one of the most important positions among marine officers is held by a graduate.

While it is true that in the days of wooden ships a sea-faring life appealed most strongly to the young man who longed for a life of adventure and excitement, it is equally true that at the present time a life at sea appeals more than ever before to the serious and deliberate young man, — the lad who cares less for adventure and looks upon the mariner's life as a high and useful calling, a life worthy of one's highest efforts. The conditions of sea-going have undergone a great improvement since the days of clipper ships. The seaman is more carefully safeguarded against the dangers of the sea than ever before. The ships of the present day are larger, stronger and better equipped for the convenience of both passengers and crew. The food is better and wages are higher. With the expansion of the world's shipping have come inventions and devices which have minimized the dangers of the sea. Water-tight compartments, the wireless telegraph, the submarine signal apparatus and the gyro-compass have contributed largely to the element of safety in ocean travel. The more scientific requirements of a mariner's life call for a higher grade of intelligence, such as this school is fitted to produce.

## A PUBLIC LANDING.

In the last two annual reports attention has been called to the inadequate landing facilities in the city of Boston. The commissioners have found this deficiency in our water-front equipment a serious handicap in their work. In the large maritime ports of Europe, notably Liverpool, Marseilles and Genoa, there are many public landing places; in Boston harbor there is no free landing of any kind. In Liverpool the largest steamers approach and lay alongside the landing stages.

## SUMMER CRUISE.

A preliminary cruise of nine days was made in and about Massachusetts Bay. The ship was inspected by His Excellency the Governor and Council on May 22. On May 28 the ship sailed from Boston with a full complement of cadets on a cruise of 9,604 miles in the North Atlantic and Mediterranean. Visits were made to the following ports: Horta, Azores; Havre, France; Plymouth, England; Malaga, Spain; Gibraltar; Tangier; Lisbon, Portugal; Funchal, Madeira; and Hamilton, Bermuda.

The "Ranger" was the first American ship to visit Malaga, Spain, since the Spanish-American war, and the first to call at Lisbon since Portugal established a republican form of government. During the stays at Malaga and Lisbon many courtesies were extended to the ship. The "Ranger" arrived in Boston on October 9, when the usual inspection was made by the commissioners.

The report of Comdr. Charles N. Atwater, U. S. N., superintendent of the school, on the annual cruise, is as follows: —

The annual docking and refit of the "Ranger" at the Charlestown Navy Yard was completed in time for the return from leave of the cadets on May 6. The annual cruise, of which a summary is appended, began when the "Ranger" sailed on May 28.

During the four months and a half of the ship's absence from Boston work was carried on as outlined under the various department headings. With the exception of some of the new fourth class, who were slow in adapting themselves to a sea life, the cadets did well throughout the cruise. They were interested in the performance of their duties, ready in such emergencies as arose, and endured cheerfully the inevitable hardships of stormy night watches under sail and hot engine and fireroom watches in the tropics. I have never sailed with a lot of young men

whose conduct, both on shipboard and ashore, averaged better than was the case this summer. The cadet officers and crew captains were especially commendable for their conduct, officer-like bearing and performance of duty, and their example was of great value to their juniors in the school.

#### SEAMANSHIP.

*Nautical Cadets.* — Instructed in making bends, hitches, knots, splices; worming, parcelling and serving rope; in the names of the different parts of the ship and of her tackle and equipment, such as spars, sails, anchor and chains; in work aloft loosing, furling, reefing and taking in sail; in marking and heaving the lead and chip log; in reading and caring for the patent log; in compass and steering, and in standing lookouts; in signaling and in other routine duties of seamen.

*Seamanship Cadets.* — The duties and responsibilities of sea officers and petty officers. They stood watch as boatswains and quartermasters, and day watches as officer of the deck under sail and steam. It was occasionally their duty to make and take in sail and to take charge and give orders at sail drill. They acted as coxswains of boats. They were instructed in making and receiving international signals. In general, as much responsibility as possible was placed upon them.

#### NAVIGATION.

The seamanship cadets were given ample opportunity to perfect themselves in dead reckoning, course and distance by middle latitude, sailing and Mercator sailing, taking departure, setting course, plotting positions, latitude and longitude by observation, azimuths, comparing chronometers, use of charts, sailing directions, tide table, light lists, and use and adjustment of instruments.

Each day, while at sea, they were required to pass in the following: noon position by dead reckoning and observation, course and distance made good since preceding noon, set and drift of current during preceding day, compass error and deviation on one heading.

The nautical cadets were instructed in boxing the compass, the elements of dead reckoning, use of hand lead and sounding machine, keeping the log and the use of the various instruments of navigation. This practical experience will be of great help during the coming winter term.

While on the coast cadets were given an opportunity of observing the various methods practiced in coastwise navigation, both by day and night.

The patent sounding machine was used constantly while on soundings.

#### MARINE ENGINEERING.

*Engineer Cadets.* — Care and preservation of boilers and machinery. Preparations for getting underway. Firing, watertending and oiling. Economy in consumption of fuel and oil. Handling engines going in and

out of port. Care and operation of dynamo engines, pumps and motor boat machinery. Making examinations and overhauling, required to maintain machinery and boilers in the highest state of efficiency. Operation and care of evaporator and distillers. Taking saturation and testing water in boilers. Practical repairs, refitting and adjusting brasses on main engine. Packing piston and valve rods. Reseating and grinding in valves. Steam fitting, and renewing joints on steam and water lines. Taking indicator cards and computing horse power of engines. Running motor lathe, turning and threading bolts, and such other work as is found practicable.

*Nautical Cadets.* — Assisted in passing coal, and were instructed in firing and economy in coal consumption and names of different tools and operation of ash hoist.

COAL REPORT.										Tons.
Coal on hand and received,	.	.	.	.	.	.	.	.	.	791.6
Expended,	.	.	.	.	.	.	.	.	.	760.5
Remaining on hand,	.	.	.	.	.	.	.	.	.	31.1
Expended as follows: —										
Galley,	.	.	.	.	.	.	.	.	.	27.0
Distilling,	.	.	.	.	.	.	.	.	.	64.9
Heating,	.	.	.	.	.	.	.	.	.	3.3
Dynamo and other auxiliaries,	.	.	.	.	.	.	.	.	.	193.6
Propulsion,	.	.	.	.	.	.	.	.	.	471.4
Total,	.	.	.	.	.	.	.	.	.	760.2

#### ELECTRICAL WORK.

*Nautical Cadets.* — Instruction in the use of electrical appliances aboard ships. Various faults, their detection and remedy; wiring, protective devices, types of lamps and fixtures; ship's lights, motors, generators, ventilating sets, etc., illustrated with apparatus. Wireless telegraph and submarine bell receiving sets.

*Second-year Cadets.* — Members of the engineering department were assigned successively to the operation of the electric plant, and had charge, under the supervision of the electrician, of the dynamos and lighting. They performed all the work of running the machines, made repairs to wiring, etc., removed troubles and kept the system working satisfactorily. Repairs were also made, as needed, to the wireless apparatus. A number of the cadets from both seamen and engineering divisions stood regular watches in the wireless room, taking and sending messages with the passing ships and shore stations. Theoretical instruction by classes was given forenoons while the ship lay in foreign ports.

#### MEDICAL DEPARTMENT.

The general health of the cadets has, on the whole, been good. The sanitary and hygienic conditions on the ship have been excellent, and there has been plenty of air space between decks at all times.

The gains physically have been satisfactory for growing boys in active training in the open air. There has been an average increase in weight



of 4.5 pounds in the cadets who were making their second cruise, and this with an average decrease in waist line of 2.4 inches and an increase in chest measure of .75 of an inch. Those cadets changing from a sedentary home life to active training showed an average loss of 4.4 pounds, with a decrease in the waist line of 2.5 inches and an increase in chest measure of .75 of an inch. The general increase in height was .5 of an inch. The average gain in reach was .75 of an inch.

The physical gain to the cadets cannot be accurately shown by measurements taken, satisfactory as these are. The improved muscular development and color have both been very marked.

### *Itinerary of Cruise of 1912.*

May 4, cadet officers and petty officers reported on board; May 6, cadets reported from month's leave; May 9, Boston to Provincetown; May 18, Provincetown to Boston; May 22, Governor's inspection; May 28, sailed on cruise.

Ports.	Distance (Miles).	Left.	Arrived.	Days at Sea.	Days in Port.
Boston-Horta, Fayal, . . . . .	2,064	May 28	June 8	12	-
Horta-Havre, France, . . . . .	1,561	June 13	June 23	11	4
Havre-Plymouth, England, . . . .	180	July 9	July 10	2	15
Plymouth-Malaga, Spain, . . . . .	1,161	July 23	July 30	8	12
Malaga-Gibraltar, . . . . .	60	Aug. 8	Aug. 8	1	8
Gibraltar-Tangier, Morocco, . . . .	35	Aug. 15	Aug. 15	1	6
Tangier-Lisbon, Portugal, . . . . .	294	Aug. 16	Aug. 18	2	1
Lisbon-Funchal, Madeira, . . . . .	531	Aug. 26	Aug. 29	4	7
Funchal-Hamilton, Bermuda, . . . .	2,959	Sept. 5	Sept. 27	23	6
Hamilton-Boston, . . . . .	759	Oct. 5	Oct. 9	5	7
	9,604			69	66

### THE WINTER TERM.

The winter term of the school commenced on November 11. The ship occupies a berth at the North End Park, Commercial Street (between the Chelsea Ferry and Charlestown bridge).

Persons interested in the work of the school are cordially invited to visit the "Ranger" on any day except Saturday and Sunday, when the cadets are absent on home leave.

The following are the officers and instructors now connected with the school: —

Superintendent and commanding officer, Comdr. Charles N. Atwater,  
U. S. N.

Executive officer, Chief Boatswain Harry R. Brayton, U. S. N.

Chief engineer, Machinist John O'Neill, U. S. N.



The "Ranger" on the passage from Madeira to Bermuda,  
September, 1912.



Navigator, A. Russell Cushing (graduate M. N. T. S.).  
 Watch officer, Chief Boatswain James Laven, U. S. N.  
 Medical officer, Gardner N. Cobb, M.D.  
 Paymaster and captain's clerk, Theodore C. Howe, U. S. N.  
 Instructor in electricity, Henry C. Fisher.  
 Instructor in mathematics, Albert L. Ware, Jr. (graduate M. N. T. S.).

#### PERSONNEL.

July 1, 1912, Rear Admiral John F. Merry, U. S. N., retired, was reappointed a commissioner for three years.

April 14, 1912, Chief Engineer John O'Neill, U. S. N., was granted leave of absence on account of illness.

April 15, 1912, Chief Machinist Joseph E. Venable, U. S. N., was appointed substitute chief engineer.

April 30, 1912, Dr. E. L. Saunders was granted a six-months leave of absence.

May 1, 1912, Dr. William M. Dunn was appointed substitute medical officer and instructor.

May 15, 1912, the assignment of Andrew J. Iverson as junior watch officer was discontinued.

July 4, 1912, Chief Boatswain Frank Miller, U. S. N., detached on account of illness.

July 6, 1912, Chief Boatswain James Laven, U. S. N., ordered to the "Ranger" as watch officer.

Nov. 11, 1912, Albert L. Ware, Jr., a graduate of the school in the class of 1911, was appointed instructor in mathematics.

Dec. 4, 1912, Dr. Edmund L. Saunders resigned after fourteen years' service as medical officer and instructor.

Dec. 5, 1912, Dr. Gardner N. Cobb of Gardner, Mass., appointed medical officer and instructor.

#### REGISTER OF GRADUATES.

The following is an abstract from the register of graduates: —

Graduated.	NAME.	Residence.	Position.	Vessel.
1894	Henry G. Carpenter, <sup>1</sup>	Roxbury,	Captain,	"Frances Alice."
1894	James E. Reardon, <sup>1</sup>	Boston,	Captain,	"Miguelito."
1895	George E. Eaton,	Wakefield,	Captain,	"Anemone."
1896	Henry R. Bodge,	Wollaston,	Captain,	"St. Helens."

<sup>1</sup> Transferred.

Graduated.	NAME.	Residence.	Position.	Vessel.
1896	Wm. N. P. Baker, . . .	Dorchester, . . .	Captain, . . .	"Pathfinder."
1896	Alvin W. Haynes, . . .	Somerville, . . .	Captain, . . .	"Allianca."
1897	Fred'k A. Sparks, . . .	Provincetown, . . .	Captain, . . .	"Machigonne."
1897	Emery Rice, . . .	Brighton, . . .	Captain, . . .	"Mongolia."
1898	Louis E. Congdon, . . .	Boston, . . .	Captain, . . .	"Rio Grande."
1898	Carl E. A. Anderson, . . .	Roslindale, . . .	Captain, . . .	"Nevadan."
1900	James S. Howes, . . .	Woods Hole, . . .	Captain, . . .	"Berkshire."
1900	I. Clarence Bailey, . . .	Kingston, . . .	Captain, . . .	Pilot boat,
1902	Arthur T. Luther, . . .	Swansea, . . .	Captain, . . .	Government vessel, Panama Canal.
1895	Albert L. Warner, . . .	Waverley, . . .	First officer, . . .	"Eleazer W. Clark."
1895	Walter J. Healey, . . .	Worcester, . . .	First officer, . . .	"Zulia."
1896	George R. Lauriat, . . .	Medford, . . .	First officer, . . .	"James Henry."
1897	Willis Howes, . . .	S. Yarmouth, . . .	First officer, . . .	"Wright."
1898	Harlowe Johnson, . . .	Mattapoisett, . . .	First officer, . . .	"Parthian."
1898	Eldon G. Freeman, . . .	Whitman, . . .	First officer, . . .	"Sequoia."
1899	Edward G. Smith, . . .	Boston, . . .	First officer, . . .	"Coya."
1900	Alfred M. Cummings, . . .	Worcester, . . .	First officer, . . .	"Arethusa."
1900	E. Newton Parker, . . .	Greenfield, . . .	First officer, . . .	"Nero."
1901	John J. Coholan, . . .	S. Bcston, . . .	First officer, . . .	-
1901	Robert W. Tucker, . . .	Kendal Green, . . .	First officer, . . .	"Ohio."
1901	Chas. D. Harrington, . . .	Cambridge, . . .	First officer, . . .	"H. M. Plant."
1902	Fred C. Seibert, . . .	Greenfield, . . .	First officer, . . .	"Vulcan."
1902	Osborne E. McKay, . . .	Provincetown, . . .	First officer, . . .	"Nanshan."
1902	Wm. I. O'Reilly, . . .	S. Boston, . . .	First officer, . . .	"Queen."
1902	Herman T. Parker, . . .	Rockport, . . .	First officer, . . .	"Parthian."
1903	Robert B. Powers, . . .	Brockton, . . .	First officer, . . .	"Hannibal."
1903	Harry M. Bostwick, . . .	Northbridge, . . .	First officer, . . .	"Ajax."
1903	Benj. O'Connell, . . .	Peabody, . . .	First officer, . . .	"Colon."
1904	John F. Williamson, . . .	Brockton, . . .	First officer, . . .	"Ivy."
1905	James A. Crocker, . . .	Nahant, . . .	First officer, . . .	"Quantico."
1897	Chas. W. Clift, . . .	Whitman, . . .	Second officer, . . .	"McClellan."
1897	Mina Dailey, . . .	Rockport, . . .	Second officer, . . .	"Arthur Sewall."
1897	H. W. G. Atkins, . . .	Holliston, . . .	Second officer, . . .	"Adansi."
1898	Charles H. Kilmer, . . .	Somerville, . . .	Second officer, . . .	"Leonidas."
1899	Walter S. Lynch, . . .	Chelsea, . . .	Second officer, . . .	"Liberty."
1900	Walter Andrew, . . .	Jamaica Plain, . . .	Second officer, . . .	"Ligonier."
1901	Theo. H. Bicknell, . . .	Melrose, . . .	Second officer, . . .	"Herman Frasch."
1902	Edwin J. Madden, . . .	Everett, . . .	Second officer, . . .	"St. Louis."
1902	Arthur Jensen, . . .	Provincetown, . . .	Second officer, . . .	"Sterling."
1902	Harry E. Boesch, . . .	Wakefield, . . .	Second officer, . . .	"Momus."



Graduated.	NAME.	Residence.	Position.	Vessel.
1902	Arthur Jensen, . .	Provincetown, .	Second officer, .	"Hannibal."
1902	Wm. M. Chisholm, . .	N. Attleboro', .	Second officer, .	-
1903	Mark Woodbury, . .	Townsend, . .	Second officer, .	"City of Memphis."
1903	Benj. O'Connell, . .	Peabody, . .	Second officer, .	"Philadelphia."
1903	Andrew B. Chase, . .	New Bedford, .	Second officer, .	"Wm. L. Walker."
1904	Leslie F. Holmes, . .	E. Whitman, . .	Second officer, .	"Antilles."
1905	Harry M. Maynard, . .	Winthrop, . .	Second officer, .	"Mayflower."
1906	Wm. H. Lee, . . . .	Roxbury, . .	Second officer, .	"Arethusa."
1907	Elmer B. Small, . . .	N. Truro, . .	Second officer, .	"Justin."
1908	Eugene P. Shevlin, . .	E. Boston, . .	Second officer, .	"Azalea."
1909	Eric E. Winkvist, . .	Jamaica Plain, .	Second officer, .	"Solace."
1909	Rob't S. Sparrow, . .	Eastham, . .	Second officer, .	"Lexington."
1909	Carroll E. Higgins, . .	Somerville, . .	Second officer, .	"Itasca."
1910	Franklin K. Tyler, . .	Beachmont, . .	Second officer, .	Lighthouse Bureau.
1910	Chester E. Morris, . .	Springfield, . .	Second officer, .	Lighthouse Bureau.
1911	Charles F. Fornason, . .	Gloucester, . .	Second officer, .	"Charess."
1900	Wm. B. Knight, . . .	Hull, . . . .	Third officer, . .	"City of Seattle."
1902	F. J. Butterfield, . .	Haverhill, . .	Third officer, . .	Army Transport.
1903	Harold C. Rideout, . .	Concord, . . .	Third officer, . .	"El Alba."
1905	Harold H. Gridley, . .	Dorchester, . .	Third officer, . .	"Brutus."
1905	Fred'k S. Walker, . .	Roxbury, . .	Third officer, . .	"Newton."
1906	Wm. H. Lee, . . . .	Boston, . . .	Third officer, . .	"Vestal."
1907	Harry L. Chick, . . .	Beverly, . . .	Third officer, . .	"Justin."
1907	Wm. M. Gifford, . . .	Woods Hole, . .	Third officer, . .	"Cyclops."
1907	Walter L. Smith, . . .	Ashburnham, . .	Third officer, . .	"Prometheus."
1911	Ernest F. Robinson, . .	E. Boston, . .	Third officer, . .	"Sterling."
1911	Wm. A. Sillars, . . .	Danvers, . . .	Third officer, . .	"Ajax."
1911	Edw. S. Ells, . . . .	Cambridge, . .	Third officer, . .	"Arethusa."
1912	Norman E. Merrill, . .	Walpole, . . .	Third officer, . .	"Comus."
1900	Jos. E. Gately, . . .	Marlborough, . .	Fourth officer, . .	"St. Paul."
1911	Henry O. K. Hanson, . .	Neponset, . .	Mate, . . . .	"Paula."
1902	A. Russell Cushing, . .	Dorchester, . .	Navigating officer.	"Ranger."
1911	Albert L. Ware, Jr., . .	Cambridge, . .	Instructor in mathematics.	"Ranger."
1895	Philip W. Lauriat, . .	Medford, . . .	1st Lieut., U. S. R. C. S.	"Seneca."
1911	Edward C. Roberts, . .	Beverly, . . .	1st Lieut., . . .	Philippine R. C. S.
1899	Jas. A. Alger, . . . .	Reading, . . .	2d Lieut., U. S. R. C. S.	"Seneca."
1900	John F. McGourty, . .	Worcester, . .	2d Lieut., U. S. R. C. S.	"Mohawk."
1906	Wm. F. Towle, . . . .	Boston, . . .	2d Lieut., U. S. R. C. S.	"Seneca."
1898	F. B. Harwood, . . .	Rockport, . .	3d Lieut., U. S. R. C. S.	"Bear."

Graduated.	NAME.	Residence.	Position.	Vessel.
1898	Clarence E. Wood, . .	Fall River, . .	Lieut., . .	U. S. Navy.
1907	Thomas Baxter, . .	S. Dennis, . .	Ensign, . .	"North Dakota."
1898	George F. Waite, . .	Winthrop, . .	Chief inspector of steamboats.	Providence, R. I.
1895	George A. Collie, . .	Worcester, . .	Nautical expert, .	Navy department.
1896	Charles S. Young, . .	Boston, . .	Nautical expert, .	Navy department.
1897	Fred'k W. Jones, . .	Winchester, . .	Nautical expert, .	Navy department.
1900	Gershom Bradford, . .	Duxbury, . .	Nautical expert, .	Navy department.
1900	William B. Knight, . .	Hull, . .	Sailing coast pilot,	"Bertha."
1903	Leander A. Clapp, . .	Brockton, . .	2d Lieut., . .	U. S. Marine Corps.
1906	Clarence E. Nutting, . .	Cambridge, . .	2d Lieut., . .	U. S. Marine Corps.
1896	Jas. H. B. Meehan, . .	Lowell, . .	Chief engineer, .	"Vulcan."
1898	Charles E. Rowe, . .	Lynn, . .	Chief engineer, .	"Hector."
1898	David R. Driver, . .	Weston, . .	Chief engineer, .	"Raymond."
1898	John C. Ganser, . .	Jamaica Plain, .	Chief engineer, .	"Carribean."
1898	Everett S. Ransom, . .	Mattapoisett, .	Chief engineer, .	"Parthenia."
1899	Frank B. Davis, . .	Dorchester, . .	Chief engineer, .	"Olivette."
1899	Forrest D. Clark, . .	Dorchester, . .	Chief engineer, .	"Harvard."
1900	Hollis M. Cornwall, . .	Melrose, . .	Chief engineer, .	"Persian."
1900	William Glover, . .	Wilmington, . .	Chief engineer, .	"J. H. Devereux."
1900	Norris R. Sibley, . .	Worcester, . .	Chief engineer, .	"Frances Hyde."
1900	Charles E. Lowe, . .	Roxbury, . .	Chief engineer, .	"Mackinaw."
1900	Elmer P. Butterworth, .	Foxborough, . .	Chief engineer, .	"J. M. Guffey."
1901	Eugene I. K. Murphy, .	Worcester, . .	Chief engineer, .	Government vessel Panama Canal.
1902	Daniel F. Butler, . .	North Easton, .	Chief engineer, .	"Gloria."
1904	Cecil L. McIntyre, . .	Upton, . .	Chief engineer, .	-
1905	Walter C. Lockhart, . .	Wakefield, . .	Chief engineer, .	"Alexander."
1897	Augustus T. Homes, . .	Ipswich, . .	Chief engineer, .	"J. M. Guffey."
1895	Michael D. Sullivan, . .	Boston, . .	First engineer, .	"Enterprise."
1896	Forrest H. McIntyre, . .	Gloucester, . .	First engineer, .	"Daniel Millard."
1898	Frank P. Killion, . .	Malden, . .	First engineer, .	"Kanai."
1898	Wm. E. Ballsdon, . .	Neponset, . .	First engineer, .	"Jas. S. Whitney."
1898	Wilbur S. Lamont, . .	Leominster, . .	First engineer, .	"Pocomoke."
1900	J. J. Donohoe, . .	Cambridge, . .	First engineer, .	"Oregon."
1900	James F. Rawdon, . .	Worcester, . .	First engineer, .	"Tuscan."
1901	Robert A. Patterson, . .	Brighton, . .	First engineer, .	"Vulcan."
1904	Charles W. Bumpus, . .	Wakefield, . .	First engineer, .	"Cape Ann."
1906	Augustus C. Caldwell, . .	Dorchester, . .	First engineer, .	"Cæsar."
1895	Fred'k H. Stackpole, . .	Hyde Park, . .	Second engineer, .	"City of Brockton."
1896	James O. Sargent, . .	Worcester, . .	Second engineer, .	"St. Louis."
1897	Perley W. Kimpton, . .	Somerville, . .	Second engineer, .	"Shawmut."

Graduated.	NAME.	Residence.	Position.	Vessel.
1898	Arthur P. Stevens, . .	Nantucket, . .	Second engineer, .	"Ponce."
1900	Ressie E. Bowser, . .	N. Abington, . .	Second engineer, .	"Nero."
1900	Earle P. Marshall, . .	North Easton, . .	Second engineer, .	"Uruguay."
1901	Sidney A. Maglathlin, . .	W. Bridgewater, . .	Second engineer, .	"Arethusa."
1901	David W. Warren, . .	Boston, . .	Second engineer, .	"Melrose."
1902	Augustus W. Hart, . .	N. Truro, . .	Second engineer, .	"Chippewa."
1902	Ernest L. Saunders, . .	Brockton, . .	Second engineer, .	"Justin."
1903	Edward A. Mercer, . .	Cambridge, . .	Second engineer, .	"Prometheus."
1903	James S. McGarry, . .	Shrewsbury, . .	Second engineer, .	"El Paso."
1905	Thomas W. Chisholm, . .	N. Billerica, . .	Second engineer, .	"Arethusa."
1905	Fred G. Carlton, . .	Maynard, . .	Second engineer, .	"Navahoe."
1907	George H. Stickney, . .	Watertown, . .	Second engineer, .	"Cyclops."
1907	Fred'k M. Coughlin, . .	N. Dartmouth, . .	Second engineer, .	"Mars."
1910	Leslie S. Badger, . .	Dorchester, . .	Second engineer, .	"Seaconnet."
1910	Geo. W. Sibley, . .	Worcester, . .	Second engineer, .	"Grecian."
1903	Rudolph Komenda, . .	Somerville, . .	Third engineer, .	"Hannibal."
1905	Charles F. Tarr, . .	Taunton, . .	Third engineer, .	"Mars."
1906	Bradford N. A. Gladding, . .	New Bedford, . .	Third engineer, .	"Massachusetts."
1906	John C. Sheedy, . .	Malden, . .	Third engineer, .	"Admiral Schley."
1907	Archie E. Bragg, . .	Woods Hole, . .	Third engineer, .	"Hannibal."
1907	Joseph R. Wier, . .	Saundersville, . .	Third engineer, .	"Brutus."
1908	Arthur E. Whiton, . .	Wakefield, . .	Third engineer, .	"Justin."
1908	George H. Cameron, . .	Wakefield, . .	Third engineer, .	"Leonidas."
1908	Thomas B. Pellett, . .	Worcester, . .	Third engineer, .	"Cyclops."
1909	Samuel J. Miller, . .	Fall River, . .	Third engineer, .	"Sterling."
1909	Everett B. Ward, . .	Lynn, . .	Third engineer, .	"Abarenda."
1910	Ernest B. Wyatt, . .	Wakefield, . .	Third engineer, .	"Vulcan."
1911	Paul R. Smith, . .	Concord, . .	Third engineer, .	"Mongolia."
1895	Geo. A. Faulkner, . .	Roxbury, . .	Keeper Cape Cod Light.	-
1896	Webb C. Maglathlin, . .	Bridgewater, . .	2d Lieut., Eng., U. S. R. C. S.	"Androscoggin."
1897	Lorenzo C. Farwell, . .	Dorchester, . .	2d Lieut., Eng., U. S. R. C. S.	"Tahoma."
1897	Albert F. Patterson, . .	Townsend, . .	2d Lieut., Eng., U. S. R. C. S.	"Woodbury."
1898	Joseph E. Sheedy, . .	Reading, . .	2d Lieut., Eng., U. S. R. C. S.	"Thetis."
1898	John T. Carr, . .	Malden, . .	2d Lieut., Eng., U. S. R. C. S.	"Snohomish."
1906	Henry C. Roach, . .	New Bedford, . .	3d Lieut., Eng., U. S. R. C. S.	"Androscoggin."
1895	Charles H. Lincoln, . .	Gloucester, . .	Marine surveyor,	"Cleveland."
1896	H. E. Kershaw, . .	Lawrence, . .	Warrant machinist.	U. S. Navy.
1898	Herbert E. Fish, . .	Mattapoissett, . .	Warrant machinist.	"New Jersey."
1895	S. B. Gaylord, . .	Boston, . .	Machinist, . .	"Newark."
1906	C. Allan Holbrook, . .	Marlborough, . .	Machinist, . .	"Idaho."

Graduated.	NAME.	Residence.	Position.	Vessel.
1902	John F. Murphy, . .	Worcester, .	Electrician, .	"Viper."
1902	William H. O'Connor, .	Roxbury, .	Electrician, .	"Cæsar."
1903	Fred S. Garland, . .	Randolph, .	Electrician, .	"Alabama."
1903	Guy H. Hudson, . .	Somerville, .	Electrician, .	"Alabama."
1904	Charles A. Hill, . .	Melrose, .	Electrician, .	"Bay State."
1904	C. George Dyson, . .	Billerica, .	Electrician, .	"Georgia."
1905	Lawrence G. Kelley, .	Taunton, .	Electrician, .	"Illinois."
1905	John F. Kinnaly, . .	S. Boston, .	Electrician, .	"Vermont."
1906	Carroll L. Morgan, . .	Beverly, .	Wireless electrician.	"San Juan."
1906	Louis H. Houghton, .	Worcester, .	Electrician, .	"Missouri."
1906	William R. Dolan, . .	Worcester, .	Electrician, .	"Cleveland."
1907	Eugene E. Chaney, . .	Arlington, .	Electrician, .	"North Dakota."
1907	Louis L. LaMontagne, .	Millers Falls, .	Electrician, .	"Pilgrim."
1910	Eugene F. Stephenson, .	Spencer, .	Electrician, .	"Neptune."
1911	Harvey M. Thorndike, .	Swampscott, .	Electrician, .	"Ajax."
1911	George L. Lockhart, .	Wakefield, .	Electrician, .	"Cæsar."
1911	William Bowen, . .	Boston, .	Cadet engineer, .	U. S. Lighthouse Bureau.
1911	Ervin L. Kelley, . .	Cambridge, .	Cadet engineer, .	U. S. Lighthouse Bureau.

## CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1912, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Withdrawn, dismissed, dropped, transferred.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	
1893, . . . . .	138	-	138	-	-	-	29	-	29	24
1894, . . . . .	42	21	63	-	-	-	26	17	43	18
1895, . . . . .	33	38	71	19	19	38	6	6	12	6
1896, . . . . .	35	39	74	17	37	54	16	15	31	17
1897, . . . . .	32	41	73	20	21	41	10	10	20	9
1898, . . . . .	42	57	99	15	25	40	12	14	26	23
1899, . . . . .	34	45	79	11	12	23	24	17	41	11
1899, . . . . .	28	50	78	14	36	50	9	12	21	14
1900, . . . . .	28	37	65	11	18	29	8	12	20	16
1901, . . . . .	34	58	92	16	22	38	16	13	29	13
1902, . . . . .	32	36	68	17	14	31	10	15	25	17
1903, . . . . .	34	32	66	16	29	45	5	12	17	31
1904, . . . . .	-	-	60	10	10	20	-	-	9	13
1905, . . . . .	-	-	65	16	19	35	-	-	18	19
1906, . . . . .	-	-	50	16	15	31	-	-	17	26
1907, . . . . .	-	-	60	10	9	19	-	-	9	9
1908, . . . . .	-	-	45	8	22	30	-	-	7	16
1909, . . . . .	-	-	81	14	15	29	-	-	16	15
1910, . . . . .	-	-	54	6	23	29	-	-	7	18
1911, . . . . .	-	-	69	20	16	36	-	-	14	15
1912, . . . . .	-	-	57	17	16	33	-	-	14	15
	-	-	1,443	260	342	602	-	-	416	330

<sup>1</sup> Beginning in 1904, the cadets upon entrance are unclassified until their second year.

## MEMBERSHIP OF THE SCHOOL.

*Graduating Class, March, 1912.*

Acorn, Albert H., Jr., . . . . .	Quincy.
Birdsall, John A., . . . . .	Melrose.
Brewster, Walter L., . . . . .	Somerville.
Cavanaugh, Richard J., . . . . .	New Bedford.
Ertel, Harold L., . . . . .	Longmeadow.
Fawcett, James D., . . . . .	Dorchester.
Horton, Chester A., . . . . .	Somerville.
Howard, Clarence L., . . . . .	Boston.
Leavitt, Harold S., . . . . .	Stoughton.
Moore, Edward A., Jr., . . . . .	Forest Hills.
O'Connell, Richard K., . . . . .	North Easton.
O'Donoghue, William H., . . . . .	Roxbury.
Perkins, Alexander G., Jr., . . . . .	Newburyport.
Thompson, John W., . . . . .	Marion.
Vlass, Roy L., . . . . .	Marlborough.
Winslow, Harold S., . . . . .	Canton.

*Graduating Class, October, 1912.*

Bickerstaff, Richard C., . . . . .	Nantucket.
Buckley, Daniel G., . . . . .	Gloucester.
Burns, Herbert A., . . . . .	New Bedford.
Culley, Albert W., . . . . .	Fitchburg.
Daniel, Joseph M., . . . . .	Osterville.
Davison, George R., . . . . .	Springfield.
Eastman, Russell A., . . . . .	West Dennis.
Folger, Ellenwood, . . . . .	Siasconset.
Gray, Robert M., . . . . .	Melrose Highlands.
Hamilton, William A., . . . . .	Cliftondale.
Marks, John M., . . . . .	Gloucester.
McGowan, Francis J., . . . . .	Somerville.
Merithew, Ralph E., . . . . .	Haverhill.
Merrill, Norman E., . . . . .	Walpole.
Racicot, Louis H., . . . . .	Lowell.
Sweetser, Daniel T., . . . . .	Haverhill.
Sylvaro, Joseph B., . . . . .	Nantucket.

*Class to graduate, April, 1913.*

Balboni, Charles J., . . . . .	New Bedford.
Burt, Arthur G., . . . . .	New Bedford.
Crocker, John W., . . . . .	Marion.
Deneen, Joseph D., . . . . .	New Bedford.
Fanning, Philip J., . . . . .	Needham.



Fawcett, Joseph C.,	Dorchester.
Fletcher, Waldo A.,	Winthrop.
Fogarty, Edward J.,	East Boston.
Goldthwait, Rutledge S.,	New Bedford.
Hathaway, Albert G.,	East Mattapoisett.
Hodges, Alden L.,	Boston.
Howland, Frederick L.,	South Dartmouth.
Hughes, Alfred E.,	Canton.
Johnson, Albert W.,	Cambridge.
Laskey, Arnold A.,	Cambridge.
MacCabe, James A.,	Osterville.
Maddock, John A.,	Newburyport.
Peterson, Nils J.,	Brockton.
Rice, Paul S.,	Newton Centre.
Sullivan, George,	New Bedford.
Tuell, Borden A.,	New Bedford.
Waldron, Philip H.,	Westborough.
Webster, Louis F.,	Cambridge.
Wells, Alfred J., Jr.,	Norwood.

*Class to graduate, October, 1913.*

Andrews, Firth B.,	Melrose.
Azevedo, Joseph F.,	North Dartmouth.
Bowman, James L.,	Central Village.
Cole, John C.,	Roxbury.
Dearborn, Ralph W.,	Mansfield.
Houston, John F., Jr.,	Jamaica Plain.
Lewis, Earle A.,	Woods Hole.
Martin, Charles A.,	Lawrence.
McIntire, Waldon A.,	East Gloucester.
McLay, Russell A.,	Lawrence.
Nelson, Frank H.,	Fall River.
Newell, Edward D.,	Gloucester.
Nichols, Gregory B.,	Danvers.
O'Connell, Thomas A.,	Roxbury.
Peterson, Carl M.,	East Gloucester.
Senior, Wilfred H.,	Boston.
Shattuck, Oliver P.,	West Acton.
Stainforth, Frederick A.,	Winthrop.
Swinson, Everett O.,	East Gloucester.
Taggart, Elmer D.,	Wakefield.
Trowbridge, Joseph C., Jr.,	Stoughton.
Wermuth, Eugene F.,	Boston.
Whitehead, Warren M.,	Reading.

*Class to graduate, April, 1914.*

Allen, Benjamin H., Jr.,	Lawrence.
Barritt, George E.,	Everett.
Borden, Wilfred B.,	South Framingham.
Cashin, Ambrose J.,	Dorchester.
Crane, Charles A.,	Winthrop.
Davison, Harold J.,	Springfield.
Dresser, Revere W.,	Wollaston.
Giblin, Thomas J., Jr.,	East Boston.
Hubbel, Huelat N.,	Pittsfield.
Kelley, Dexter,	Hyannis.
Lee, Samuel J.,	Roxbury.
McCabe, Hugh V.,	Randolph.
Nutter, Nelson T.,	Newburyport.
Orcutt, William H.,	Winthrop.
O'Donoghue, Geoffrey C.,	Roxbury.
Peterson, C. Harold,	Norwood.
Reed, Ten Eyck H.,	South Framingham.
Severance, Leslie T.,	Cambridge.
Sweeney, James A.,	East Boston.
Tewksbury, Richard S.,	Winthrop.
Tucker, Charles P.,	Boston.
Turner, Joseph L.,	Dorchester.

*Class to graduate, October, 1914.*

Besse, Chester L.,	South Hanson.
Brewster, Fred H.,	Somerville.
Burton, Wesley H.,	Plainville.
Concannon, Joseph L.,	South Boston.
Crosby, Gerard R.,	Orleans.
Douglas, Herbert T.,	Somerville.
Fogarty, William H.,	Dorchester.
Francis, Joseph W.,	North Truro.
Gately, Grant,	Boston.
Gates, Samuel A.,	Malden.
Goodwin, Arthur C.,	Cambridge.
Harding, John L.,	Taunton.
Harrington, F. Palmer,	Malden.
Hornstein, Philip E.,	East Boston.
Horton, Laurence L.,	Eastham.
Kirchner, John L.,	Hinsdale.
Krey, Arthur W.,	Boston.
Lane, John A.,	Rockport.
Moriarty, James F.,	Chicopee.
Murphy, Edward F., Jr.,	Fall River.
Poole, Lester B.,	Marlborough.
Ruggles, Henry S.,	Dorchester.

Seymour, William H., . . . . .	Dorchester.
Stowell, James A., . . . . .	Walpole.
Swinson, David H., . . . . .	East Gloucester.
Wood, Orrin C., . . . . .	Winthrop.

### APPROPRIATIONS.

The appropriations for the school for the fiscal year 1912, from Dec. 1, 1911, to Nov. 30, 1912, are here accounted for as follows:—

#### *Current Expenses.*

Appropriation, . . . . .	\$62,000 00
Expended:—	
Pay roll, . . . . .	\$29,457 64
Provisions, . . . . .	14,727 34
Seamanship department, . . . . .	3,512 06
Engineering department, . . . . .	9,226 74
Instruction, . . . . .	1,632 03
Miscellaneous, . . . . .	3,439 95
Total amount expended, . . . . .	<hr/> 61,995 76
Balance unexpended, . . . . .	\$4 24

#### *Office Expenses.*

Appropriation, . . . . .	\$5,000 00
Expended:—	
Salaries, . . . . .	\$2,892 14
Advertising, . . . . .	925 29
Printing, . . . . .	386 52
Commissioners' expenses, . . . . .	141 00
Stationery and postage, . . . . .	350 01
Miscellaneous, . . . . .	304 92
Total amount expended, . . . . .	<hr/> 4,999 88
Balance unexpended, . . . . .	\$0 12

Respectfully submitted,

JOHN F. MERRY,

REAR ADMIRAL, U. S. N. (RETIRED).

HON. JOHN READ, LATE U. S. N.

WILLIAM E. MCKAY.

Boston, Jan. 1, 1913.

## FEDERAL AND STATE LEGISLATION.

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### AUTHORITY OF THE UNITED STATES.

H. R. 24145. APPROVED MARCH 4, 1911.

#### AN ACT FOR THE ESTABLISHMENT OF MARINE SCHOOLS, AND FOR OTHER PURPOSES.

That the Secretary of the Navy, to promote nautical education, is hereby authorized and empowered to furnish, upon the application in writing of the governor of a State, a suitable vessel of the navy, with all her apparel, charts, books, and instruments of navigation, provided the same can be spared without detriment to the naval service, to be used for the benefit of any nautical school, or school or college having a nautical branch, established at each of the following ports of the United States: Boston, Philadelphia, New York, Seattle, San Francisco, Baltimore, Detroit, Saginaw, Michigan, Norfolk, and Corpus Christi, upon the condition that there shall be maintained at such port a school or branch of a school for the instruction of youths in navigation, steamship-marine engineering, and all matters pertaining to the proper construction, equipment, and sailing of vessels or any particular branch thereof.

SECTION 2. That a sum not exceeding the amount annually appropriated by any State or municipality for the purpose of maintaining such a marine school or schools or the nautical branch thereof is hereby authorized to be appropriated for the purpose of aiding in the maintenance and support of such school or schools: *provided, however*, that appropriations shall be made for one school in any port heretofore named in section one and that the appropriation for any one year shall not exceed twenty-five thousand dollars for any one school.

SECTION 3. That the President of the United States is hereby authorized, when in his opinion the same can be done without detriment to the public service, to detail proper officers of the navy as superintendents of or instructors in such schools: *provided*, that if any such school shall be discontinued, or the good of the naval service shall require, such vessel shall be immediately restored to the Secretary of the Navy and the officers so detailed recalled: *and*

*provided further*, that no person shall be sentenced to or received at such schools as a punishment or commutation of punishment for crime.

SECTION 4. That all laws and parts of laws in conflict herewith are hereby repealed.

## AUTHORITY OF THE STATE OF MASSACHUSETTS.

CHAPTER 45, REVISED LAWS, AS AMENDED BY CHAPTER 171, ACTS OF 1903.

### THE NAUTICAL TRAINING SCHOOL.

SECTION 1. There shall be a board of commissioners of the Massachusetts nautical training school consisting of three citizens of the commonwealth, one of whom shall annually, before the first day of July, be appointed by the governor, with the advice and consent of the council, for a term of three years from said first day of July.

SECTION 2. Said commissioners shall serve without compensation, but they shall be reimbursed by the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 3. They shall provide and maintain a nautical training school for the instruction and training of pupils in the science and practice of navigation, shall provide accommodations for the school on board a proper vessel, purchase and provide books, stationery, apparatus and supplies needed in the work of the school, appoint and remove instructors and other necessary employees, determine their number and compensation, fix the terms and conditions upon which pupils shall be received and instructed in the school and be discharged or dismissed therefrom, establish all regulations necessary for its proper management and shall from time to time provide for cruises in or from the harbor of Boston.

SECTION 4. They may receive from the United States government, and use for the accommodation of the school, such vessels as the secretary of the navy may detail.

SECTION 5. They may annually expend such sum as the general court may from year to year appropriate, which shall be paid by the commonwealth; and they shall annually submit an estimate of the expense required in making cruises in or from the harbor of Boston, and the amount of said estimate, after approval by the governor and council and subject to the provisions of chapter six, shall be advanced to the commanding officer of the vessel detailed therefor, who shall give a bond in the sum of ten thousand dollars,

with sureties approved by the governor and council, for its proper disbursement. Said advance shall not exceed ten thousand dollars for six months, and shall be accounted for by properly approved vouchers within thirty days after the termination of said cruises.

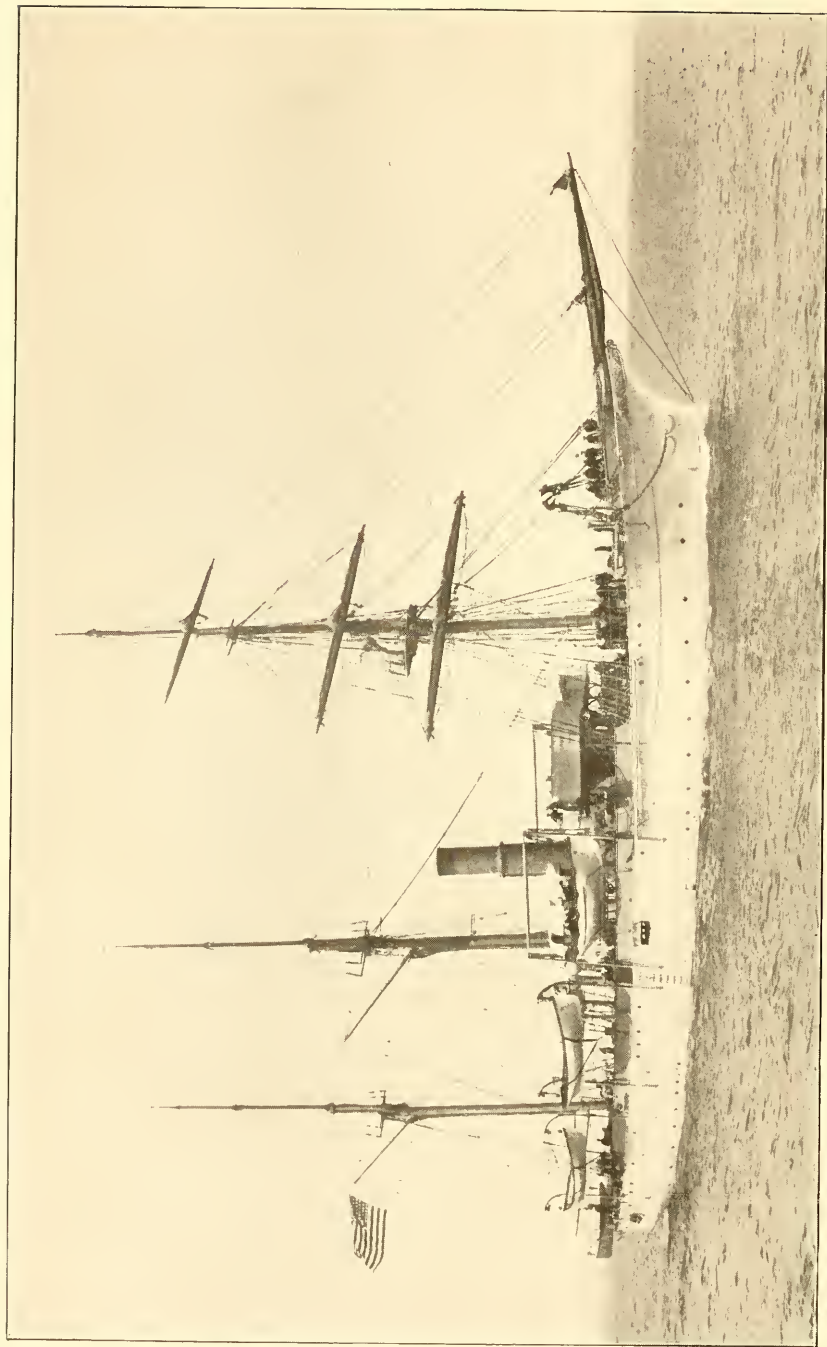
SECTION 6. They shall annually, in January, report to the general court a detailed statement of all moneys appropriated and expended during the preceding year for the nautical training school, stating the results of the work during such year and making any necessary recommendations.











The Massachusetts Nautical Training Ship "Ranger" leaving Boston Harbor on the Summer Cruise.

TWENTY-SECOND ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

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JANUARY 1, 1914



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THE STATE BOARD OF PUBLICATION



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COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL  
2A PARK STREET, BOSTON

---

JOHN F. MERRY, *Chairman*  
REAR ADMIRAL, U. S. N. (RETIRED)  
HON. JOHN READ, LATE U. S. N.  
WILLIAM E. MCKAY

---

WILLIAM H. DIMICK, *Secretary*









# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The commissioners have the honor to submit their report of the operations of the school for the year 1913.

### THE WORK IN GENERAL.

The Massachusetts Nautical School has experienced an unusually successful year, and the work was never in a more prosperous condition than it is at present. There has been an increase in the number of applications received, and the school has been filled to the limit imposed by the equipment.

The officers and instructors have been faithful and efficient in maintaining the work at a high standard. At the beginning of the Spanish-American war in 1898, the exigencies of the naval service compelled the Department to detach all naval officers on the active list then connected with the school. Since that time, no commissioned naval officer on the active list has been ordered to the school until this year, when on October 26 one was ordered to the "Ranger" as executive officer. The commissioners believe that if the former custom of ordering active naval officers to the ship is resumed, it will be an advantage to the school.

In March an act was passed by the Legislature providing that the Massachusetts Nautical Training School shall hereafter be known and designated as the Massachusetts Nautical School. The work of the school is not in any way of a correctional character, and the object of this legislation was to prevent such an impression.

In the spring the ship was placed in dry dock at the Charlestown Navy Yard, a radio set was permanently installed, and the ship was thoroughly overhauled for the summer cruise. In order to afford the citizens of the Commonwealth an equal opportunity to share the advantages of the school, eight hundred placards announcing the spring examination were printed and placed in the libraries and post offices of the State.

With greater efficiency in view, the public nautical schools located at Philadelphia and New York have been reorganized during the past year along lines similar to the Massachusetts school. Communications have been received from the mayor of Philadelphia, the directors of the Pennsylvania school, and the Board of governors of the New York school, requesting information regarding the methods used and the courses of study followed in this school.

It becomes more and more evident, as the Panama Canal approaches completion, that the American merchant marine is about to enter upon an era of unusual growth and expansion. The establishment of lines of American steamers between New York and Rio Janeiro and between Boston and the Pacific Coast is significant of the tendency towards developing our foreign shipping. Within a year or two of the opening of the Canal for general use, we shall probably see lines of steamers running between Atlantic coast ports and Valparaíso, Callao, and Guayaquil; between New York and the Orient.

The interoceanic canal will shorten the sailing distance between New York and important commercial centers as follows: San Francisco, from 13,135 to 5,262 nautical miles; Guayaquil, from 10,215 to 2,810; Callao, from 9,613 to 3,363; Iquique, from 9,143 to 4,004; Valparaíso, from 8,380 to 4,633; Honolulu, from 13,312 to 6,700; Yokohama, from 13,079 to 9,798; and Melbourne, from 12,852 to 10,030. Consequently extensive modifications will be made in ocean trade routes, and these anticipated changes are now engaging the attention of shipping men on both sides of the Atlantic. New ships are being built and new lines will be established to meet the demands of trade.

The passage of the fifth section of the Panama Canal act providing for the admission of foreign-built ships not over five

years old, owned by Americans, to American registry for the purpose of engaging in foreign trade, has made it possible for our tonnage to be considerably increased by the addition of some of the ships now flying foreign flags, but representing American capital.

The necessity for a larger number of competent American merchant marine officers was clearly manifested during the past year when the new law, requiring vessels, propelled by machinery, of one thousand gross tons or more to carry a third officer, went into effect. American ship owners were in many instances unable to obtain a full complement of officers.

Not for fifty years have conditions been so favorable for the restoration of our mercantile marine as they are to-day, and the mariner's vocation, with its healthy outdoor life, its scientific requirements, and its good income and certain promotion, is proving attractive to many young men of the State as it did in the earlier history of the country.

Nautical education is being maintained at the highest efficiency in the great maritime countries of Europe. Germany has recently added another large ship to its fleet of nautical training ships; and now provides elementary instruction in internal combustion motors.

#### THE STEAMBOAT INSPECTION LAWS.

Many of the graduates of the school nineteen or twenty years of age are entirely qualified to accept positions as third officers or as third assistant engineers, but they are barred from doing so by the laws governing the steamboat inspection service, requiring that all applicants for a license must be twenty-one years of age. The number of licensed junior officers is entirely inadequate to meet the large demand which exists at the present time. The situation, which is giving ship owners much concern, will be relieved very materially if graduates of the three nautical schools located at New York, Boston and Philadelphia, who have reached the age of nineteen years, and have had one year's actual experience in the merchant marine, are allowed to present themselves for examination, and, if found qualified in every respect, granted a

license as third officer or third assistant engineer covering vessels of 3,000 or 3,500 tons. Such an amendment of the steamboat inspection laws is approved by ship owners, marine superintendents, and many other men familiar with the shipping industry. It would have a tendency to retain in the merchant marine many active, ambitious and competent young men who enter the school at sixteen years of age and graduate at eighteen, and who do not care to serve the required three years as quartermaster or oiler before they can qualify for a license and an officer's position.

#### THE SUMMER CRUISE.

The summer term commenced on May 5. The ship sailed on a preliminary cruise on May 8, calling at Gloucester, Marblehead and Provincetown, returning to Boston on May 25. The annual inspection of the ship and school by His Excellency the Governor and Council was held on May 28. Short addresses were made to the cadets by Gov. Eugene N. Foss, Lieut. Gov. David I. Walsh, Rear Admiral John F. Merry, U. S. N., Hon. John Read, Capt. DeWitt Coffman, Commandant Boston Navy Yard, Capt. George E. Goodwin and Hon. Charles T. Gallagher.

The "Ranger" sailed from Boston on May 31. The itinerary of the cruise included visits to the following ports: Ponta Delgada, Cadiz, Algiers, Naples, Leghorn, Marseilles, Barcelona, Gibraltar, Madeira and Bermuda. With the exception of Cadiz, the European ports visited were all in the Mediterranean. The commissioners desire to express their appreciation of the many courtesies extended to the cadets and crew of the "Ranger" by the American consuls and other authorities in the various ports visited.

The "Ranger" anchored near Boston lightship on October 9, but was unable to reach the upper harbor on account of a dense fog until the afternoon of the 10th. The ship proceeded immediately to the North End Park, and was inspected by the commissioners.

The following is from the report upon the annual cruise by Comdr. Charles N. Atwater, U. S. N., superintendent of the school: —

The "Ranger's" preliminary cruise began with her departure from the navy yard on May 8 and lasted until the inspection by the Governor on May 28. While Gloucester was the vessel's base, brief visits were made to Rockport, Marblehead and Provincetown.

The "Ranger" sailed from Boston for the Mediterranean on May 31 and returned to her berth at North End Park on October 10. The experiment of making the cruise in southern waters was successful. Drills and exercises were carried on early mornings and late afternoons in order to avoid violent exercise during the middle of the day; but the heat was at no time oppressive and the average health of the cadets continued excellent. The cadets profited by the opportunity of visiting unusual French, Spanish and Italian seaports to gain a knowledge of Latin shipping facilities and to learn something of the people. From Naples about two-thirds of them were granted five days' leave to visit Rome, where their bearing and conduct induced favorable comment. As was to be expected from the kind of youths in the school, there was little misconduct of a serious nature and I question if any body of young men could be assembled whose behavior under similar circumstances would have been more creditable.

#### SEAMANSHIP.

*Nautical Cadets.* — Instructed in making bends, hitches, knots, splices; worming, parcelling and serving rope; in the names of the different parts of the ship and of her tackle and equipment, such as spars, sails, anchors, and chains; in work aloft loosing, furling, reefing and taking in sail; in marking and heaving the lead and chip log; in reading and caring for the patent log; in compass and steering, and in standing lookouts; in signaling and in other routine duties of seamen.

*Seaman Cadets.* — The duties and responsibilities of sea officers and petty officers. They stood watch as boatswains and quartermasters, and day watches as officer of the deck under sail and steam. It was occasionally their duty to make and take in sail and to take charge and give orders at sail drill. They acted as coxswains of boats. They were instructed in making and receiving international signals. In general, as much responsibility as possible was placed upon them.

#### NAVIGATION.

*Nautical Cadets.* — Instructed in boxing the compass, the elements of dead reckoning, use of hand lead and sounding machine, keeping the log and the use of the various instruments of navigation. While on the coast cadets were encouraged to observe the various methods practiced in coastwise navigation, both by day and night. The patent sounding machine was used constantly while on soundings.

*Seaman Cadets.* — Opportunities to perfect themselves in dead reckoning, course and distance by middle latitude, sailing and Mercator sailing, taking departure, setting course, plotting positions, latitude and longi-



tude by observation, azimuths, comparing chronometers, use of charts, sailing directions, tide table, light lists, and use and adjustment of instruments. Each day, while at sea, they were required to pass in the following: noon position by dead reckoning and observation, course and distance made good since preceding noon, set and drift of current during preceding day, compass error and deviation on one heading. Each morning during the latter part of the cruise starsights were taken whenever the weather permitted.

### MARINE ENGINEERING.

*Nautical Cadets.* — Coal passing, firing, names and uses of firing tools and of boiler fittings.

*Engineer Cadets.* — Instructed in firing, oiling, operation of main and auxiliary machinery, overhaul and repairs to same, in port and at sea; finding dead center and valve setting for main and variable expansion valves; pipe systems; log writing; coal consumption and keeping check on coal as received on board; inspection, care and preservation of boilers, testing water in same for salt and acidity; taking indicate diagrams and reading same for defective valve setting; finding mean pressure from diagrams by ordinates and planimeter; working out horse power of engines by simple rules and logarithms; care and caution necessary in using steam and in starting and stopping engines; care and preservation of hull and fittings.

### COAL REPORT.

	Tons.
Coal on hand at beginning and received during cruise, . . . . .	856.0
Expended, . . . . .	826.0
	<hr/>
Remaining on hand, . . . . .	30.0
Expended as follows: —	
Galley, . . . . .	22.2
Distilling, . . . . .	68.7
Heating, . . . . .	2.9
Dynamo and other auxiliaries, . . . . .	248.5
Moving ship, . . . . .	483.7
	<hr/>
Total, . . . . .	826.0

### ELECTRICAL WORK.

*Nautical Cadets.* — Instruction was given in the use of electrical appliances aboard ships, ship's lights, types of lamps, fixtures, motors, generators, ventilating sets and protective devices. Instruction in testing for various faults and repairs to the same.

*Engineer Cadets.* — Assigned to the operation and care of the electrical plant under the supervision of the electrician. They performed all the work connected with the dynamos and electrical machinery and made repairs to the wiring, etc., as necessary.

A number of nautical and engineer cadets stood wireless watches, and messages were received and sent to and from passing ships. These cadets were given instruction in the care and operation of wireless apparatus.

#### MEDICAL DEPARTMENT.

The general health of the cadets has been excellent. The usual sanitary measures have been carried out, with good results; but of more importance is the fact that the cadets have become interested in problems of ship's sanitation.

The value of the summer cruise as a factor in physical development is apparent from the following measurements: the cadets making their first cruise showed an increase in average chest girth from 31.4 to 33.5 inches, and in chest expansion from 2.74 to 3.14 inches; similarly those on their second cruise increased from 32.15 to 34.29 inches, and from 2.9 to 3.13 inches.

#### *Itinerary of the Cruise of 1913.*

May 8, Boston to Gloucester; May 20, Gloucester to Rockport; May 21, Rockport to Marblehead; May 23, Marblehead to Provincetown; May 25, Provincetown to Boston; May 28, Governor's inspection; May 31, sailed on cruise.

PORTS.	Distance (Miles).	Left.	Arrived.	Days at Sea.	Days in Port.
Boston-Ponta Delgada, . . . .	2,222	May 31	June 13	13	-
Ponta Delgada-Cadiz, . . . .	926	June 17	June 25	8	4
Cadiz-Algiers, . . . . .	502	July 1	July 4	3	6
Algiers-Naples, . . . . .	579	July 9	July 13	4	5
Naples-Leghorn, . . . . .	306	July 24	July 26	2	11
Leghorn-Marseilles, . . . . .	235	Aug. 2	Aug. 3	1	7
Marseilles-Barcelona, . . . . .	188	Aug. 11	Aug. 12	1	8
Barcelona-Gibraltar, . . . . .	518	Aug. 19	Aug. 22	3	7
Gibraltar-Madeira, . . . . .	629	Aug. 28	Sept. 2	5	6
Madeira-Bermuda, . . . . .	2,881	Sept. 8	Sept. 29	21	6
Bermuda-Boston, . . . . .	751	Oct. 5	Oct. 10	5	6

#### THE WINTER TERM.

The winter term commenced on November 10, with an enrollment of 104 cadets, representing fifty-three cities and towns in the State, extending from Provincetown to North Adams. The ship occupies the usual berth at the North End Park, Commercial Street (between the Chelsea Ferry and the Charlestown bridge).

The following is the study schedule for the winter term of 1913-14:—



	First Class, Seamanship.	Second Class, Seamanship.	First Class, Engineers.	Second Class, Engineers.	Third Class, First Section.	Third Class, Second Section.	Fourth Class, First Section.	Fourth Class, Second Section.
Monday { 9-10, . 10-11, . 11-20-12, 12-12.40,	Mathematics. Study. Navigation. Study.	Study. Mathematics. Navigation.	Steam. Study. Mathematics. Study.	Study. Steam. Study. Mathematics.	Navigation. Study. Seamanship. Study.	Study. Navigation. Study. Seamanship.	Seamanship. Study. Steam. English.	Study. Seamanship. English. Steam.
Tuesday { 9-10, . 10-11, . 11-20-12, 12-12.40,	Navigation. Study. English. Study.	Study. Navigation. Study. English.	Steam. Study. Electricity. Study.	Study. Steam. Study. Electricity.	Electricity. Study. Steam. Study.	Study. Electricity. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Wednesday { 9-10, . 10-11, . 11-20-12, 12-12.40,	Seamanship. Study. Navigation. Study.	Study. Seamanship. Study. Navigation.	English. Study. Electricity. Study.	Study. English. Study. Electricity.	Navigation. Study. Mathematics. Study.	Study. Navigation. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.
Thursday { 9-10, . 10-11, . 11-20-12, 12-12.40,	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.	Seamanship. English. Steam. Study.	English. Seamanship. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Friday { 9-10, . 10-11, . 11-20-12, 12-12.40,	Seamanship. Study. English. Study.	Study. Seamanship. Study. English.	Mathematics. Study. Steam. Study.	Study. Mathematics. Study. Steam.	English. Study. Mathematics. Study.	Study. English. Study. Mathematics.	Electricity. Study. Seamanship. Study.	Study. Electricity. Study. Seamanship.

Persons interested in the work of the school are cordially invited to visit the "Ranger" on any day except Saturday or Sunday, when the cadets are absent on home leave.

The following are the officers and instructors now connected with the school: —

Superintendent and commanding officer, Comdr. Charles N. Atwater, U. S. N.

Executive officer, Lieut. Alfred H. Miles, U. S. N.

Chief engineer, Machinist John O'Neill, U. S. N.

Navigator, A. Russell Cushing (graduate M. N. S.).

Watch officer, Chief Boatswain Henry Hudson, U. S. N.

Medical officer, Gardner N. Cobb, M.D.

Paymaster and captain's clerk, Theodore C. Howe, U. S. N.

Instructor in electricity, Frank L. Downey (graduate M. N. S.).

Instructor in mathematics, Albert L. Ware, Jr. (graduate M. N. S.).

#### PERSONNEL.

July 1, 1913, Hon. John Read was reappointed a commissioner for three years.

Sept. 24, 1913, Mr. F. Stanhope Hill, who was secretary of the Board of Commissioners of the Massachusetts Nautical School for fourteen years, from Aug. 4, 1894, until May 15, 1908, died at his home in Cambridge.

May 1, 1913, Frank L. Downey, a graduate of the school in the class of 1911, was appointed instructor in electricity.

May 7, 1913, Henry C. Fisher, instructor in electricity, resigned.

Oct. 17, 1913, Chief Boatswain Harry R. Brayton, executive officer, was detached.

Oct. 26, 1913, Lieut. Alfred H. Miles, U. S. N., was ordered to the "Ranger" as executive officer.

Nov. 28, 1913, Chief Boatswain James Laven, U. S. N., was detached by the Navy Department.

Nov. 29, 1913, Chief Boatswain Henry Hudson, U. S. N., was ordered to the ship as watch officer.

## REGISTER OF GRADUATES.

The following is an abstract from the register of graduates: —

Graduated.	NAME.	Residence.	Position.	Vessel.
1894	Henry G. Carpenter, <sup>1</sup>	Roxbury,	Captain,	"Frances Alice."
1894	James E. Reardon, <sup>1</sup>	Roxbury,	Captain,	"Santurce" (1,836 tons).
1895	George E. Eaton,	Wakefield,	Captain,	"Anemone."
1896	Henry R. Bodge,	Wollaston,	Captain,	"Northland" (3,282 tons).
1896	Wm. N. P. Baker,	Dorchester,	Captain,	"Pathfinder" (2,792 tons).
1896	Alvin W. Haynes,	Somerville,	Captain,	"Panama" (5,667 tons).
1896	Geo. R. Lauriat,	Medford,	Captain,	"Gen. Geo. H. Weeks."
1897	Fred'k A. Sparks,	Provincetown,	Captain,	"Machigonne."
1897	Willis Howes,	S. Yarmouth,	Captain,	"El Aguilera."
1897	Emery Rice,	Brighton,	Captain,	"Mongolia" (13,658 tons).
1897	H. W. G. Atkins,	Holliston,	Captain,	—
1898	Louis E. Congdon,	Boston,	Captain,	"Colorado" (2,764 tons).
1898	Carl E. A. Anderson,	Roslindale,	Captain,	"Nevadan" (4,408 tons).
1900	James S. Howes,	Woods Hole,	Captain,	"Alleghany" (1,704 tons).
1902	Herman T. Parker,	Rockport,	Captain,	"Itasca" (1,416 tons).
1902	Arthur T. Luther,	Swansea,	Captain,	Government vessel, Panama Canal.
1903	Robert B. Powers,	Brockton,	Captain,	"Hector" (11,200 tons).
1895	Albert L. Warner,	Waverley,	First officer,	"Eleazer W. Clark."
1895	Walter J. Healey,	Worcester,	First officer,	"Zulia."
1898	Harlowe Johnson,	Mattapoisett,	First officer,	"Parthian."
1898	Eldon G. Freeman,	Whitman,	First officer,	"Sequoia."
1899	Edward G. Smith,	Boston,	First officer,	American-Hawaiian Line.
1900	Alfred M. Cummings,	Worcester,	First officer,	"Saturn."
1900	E. Newton Parker,	Greenfield,	First officer,	"Nero."
1901	John J. Coholan,	S. Boston,	First officer,	"Everett."
1901	Robert W. Tucker,	Kendal Green,	First officer,	"Abarenda."
1901	Chas D. Harrington,	Cambridge,	First officer,	"H. M. Plant." <sup>1</sup>
1901	Theodore H. Bicknell,	Melrose,	First officer,	"Herman Frasch."
1902	Fred C. Seibert,	Greenfield,	First officer,	"Proteus."
1902	Osborne E. McKay,	Provincetown,	First officer,	"Nanshan."
1902	Wm. I. O'Reilly,	S. Boston,	First officer,	"Queen."
1902	Edwin J. Madden,	Everett,	First officer,	"St. Louis."
1904	John F. Williamson,	Brockton,	First officer,	"Ivy."
1905	Fred'k S. Walker,	Dorchester,	First officer,	"Newton."
1905	James A. Crocker,	Nahant,	First officer,	"Frederick."

<sup>1</sup> Transferred.

Graduated.	NAME.	Residence.	Position.	Vessel.
1908	Eugene P. Shevlin, . .	E. Boston, . .	First officer, . .	"Tulip."
1908	Ernest F. Robinson, . .	E. Boston, . .	First officer, . .	"Sterling."
1897	Chas. W. Clift, . . . .	Whitman, . . . .	Second officer, . .	"McClellan."
1897	Mina Dailey, . . . .	Rockport, . . . .	Second officer, . .	"Arthur Sewall."
1898	Charles H. Kilmer, . . .	Somerville, . . .	Second officer, . .	"Leonidas."
1899	Walter S. Lynch, . . . .	Chelsea, . . . .	Second officer, . .	"Liberty."
1902	Arthur Jenson, . . . .	Provincetown, . .	Second officer, . .	"Nereus."
1902	Harry E. Boesch, . . . .	Wakefield, . . . .	Second officer, . .	"Momus."
1902	Fred J. Butterfield, . .	Haverhill, . . . .	Second officer, . .	"Cyclops."
1902	Wm. M. Chisholm, . . . .	N. Attleboro', . .	Second officer, . .	-
1903	Mark Woodbury, . . . .	Townsend, . . . .	Second officer, . .	"City of Memphis."
1903	Harold C. Rideout, . . .	Concord, . . . .	Second officer, . .	"Comus."
1903	Benj. O'Connell, . . . .	Peabody, . . . .	Second officer, . .	"Philadelphia."
1903	Andrew B. Chase, . . . .	New Bedford, . .	Second officer, . .	"Wm. L. Walker."
1904	Leslie F. Holmes, . . . .	E. Whitman, . . .	Second officer, . .	"Antilles."
1905	Harry M. Maynard, . . .	Winthrop, . . . .	Second officer, . .	"Mayflower."
1906	Wm. H. Lee, . . . . .	Roxbury, . . . .	Second officer, . .	"Saturn."
1907	Harry L. Chick, . . . .	Beverly, . . . .	Second officer, . .	"Nanshan."
1907	Elmer B. Small, . . . .	N. Truro, . . . .	Second officer, . .	"Justin."
1907	Walter L. Smith, . . . .	Ashburnham, . . .	Second officer, . .	"Abarenda."
1907	William M. Gifford, . . .	Woods Hole, . . .	Second officer, . .	"Cyclops."
1908	Edw. S. Ells, Jr., . . . .	Cambridge, . . . .	Second officer, . .	"Alexander."
1909	Eric E. Winquist, . . . .	Jamaica Plain, . .	Second officer, . .	"Solace."
1909	Robert S. Sparrow, . . .	Eastham, . . . .	Second officer, . .	"Newton."
1909	Harold C. Cooper, . . . .	Worcester, . . . .	Second officer, . .	"Sterling."
1909	Carroll E. Higgins, . . .	Somerville, . . . .	Second officer, . .	"Itasca."
1910	Franklin K. Tyler, . . . .	Beachmont, . . . .	Second officer, . .	"Geo. E. Warren."
1910	Chester E. Morris, . . . .	Springfield, . . .	Second officer, . .	"Anemone."
1911	Harold S. Dexter, . . . .	Mattapoisett, . . .	Second officer, . .	"Jason."
1904	Mortlandt T. Chick, . . .	Brookline, . . . .	Third officer, . . .	"Justin."
1909	Wm. A. Sillars, . . . . .	Danvers, . . . .	Third officer, . . .	"Abarenda."
1911	Raymond C. Vose, . . . .	Cambridge, . . . .	Third officer, . . .	"Nacoochee."
1912	Clarence L. Howard, . . .	Auburndale, . . . .	Third officer, . . .	"Nereus."
1912	Norman E. Merrill, . . . .	Walpole, . . . .	Third officer, . . .	"Comus."
1900	Jos. E. Gately, . . . . .	Marlborough, . . .	Fourth officer, . .	"St. Paul" (11,629 tons).
1911	Chas. F. Fornason, . . . .	Gloucester, . . . .	Junior third officer,	"New York" (10,798 tons).
1902	A. Russell Cushing, . . .	Dorchester, . . . .	Navigating officer,	"Ranger."
1911	Albert L. Ware, Jr., . . .	Cambridge, . . . .	Instructor in mathematics,	"Ranger."
1911	Frank L. Downey, . . . .	N. Easton, . . . .	Instructor in electricity,	"Ranger."

Graduated.	NAME.	Residence.	Position.	Vessel.
1895	Philip W. Lauriat, .	Medford, .	1st Lieut. U. S. R. C. S.	"Seneca."
1899	James A. Alger, .	Reading, .	1st Lieut., U. S. R. C. S.	"Unalga."
1904	Edward C. Roberts, .	Beverly, .	1st Lieut., .	Philippine R. C. S.
1900	John F. McGourty, .	Worcester, .	2d Lieut., U. S. R. C. S.	School of Instruction, New London, Conn.
1906	William F. Towle, .	Boston, .	2d Lieut., U. S. R. C. S.	"McCulloch."
1898	F. B. Harwood, .	Rockport, .	3d Lieut., U. S. R. C. S.	"Bear."
1898	Clarence E. Wood, .	Fall River, .	Lieut., .	U. S. Navy.
1907	Thomas Baxter, .	S. Dennis, .	Ensign, .	U. S. Navy.
1898	George F. Waite, .	Winthrop, .	Chief inspector of steamboats.	Providence, R. I.
1895	George A. Collie, .	Worcester, .	Nautical expert, .	Navy Department.
1896	Charles S. Young, .	Boston, .	Nautical expert, .	Navy Department.
1897	Fred'k W. Jones, .	Winchester, .	Nautical expert, .	Navy Department.
1900	Gershom Bradford, .	Duxbury, .	Nautical expert, .	Navy Department.
1900	I. Clarence Bailey, .	Kingston, .	Pilot, .	Boston Pilot Boat Service.
1900	William B. Knight, .	Hull, .	Sailing coast pilot,	"Bertha."
1907	Harry Manter, .	Nantucket, .	2d Pilot, .	"Pequonock."
1903	Leander A. Clapp, .	Brockton, .	2d Lieut., .	U. S. Marine Corps.
1906	Clarence E. Nutting, .	Cambridge, .	2d Lieut., .	U. S. Marine Corps.
1912	John N. Thompson, .	Marion, .	Cadet officer, .	"Tulip."
1895	Geo. A. Faulkner, .	Roxbury, .	Keeper, .	Cape Cod Light.
1897	Orison W. Woodbury, .	Lynn, .	Mate, .	"Ellesmere."
1904	Andrew J. Iverson, .	Salem, .	Mate, .	"Ravenscraig."
1911	Henry O. K. Hanson, .	Neponset, .	Mate, .	"Paula."
1896	Jas. H. B. Meehan, .	Lowell, .	Chief engineer, .	"Proteus" (19,000 tons).
1896	Christopher W. Sorenson, .	Somerville, .	Chief engineer, .	"Nassau."
1897	Augustus T. Homes, .	Ipswich, .	Chief engineer, .	"J. M. Guffey" (2,520 tons).
1898	Charles E. Rowe, .	Lynn, .	Chief engineer, .	"Hector" (11,200 tons).
1898	David R. Driver, .	Weston, .	Chief engineer, .	"Raymond."
1898	John C. Ganser, .	Jamaica Plain, .	Chief engineer, .	"Caribbean" (2,800 tons).
1898	Everett S. Ransom, .	Mattapoisett, .	Chief engineer, .	"Parthenia."
1899	Frank B. Davis, .	Dorchester, .	Chief engineer, .	"Olivette" (1,678 tons).
1899	Forrest D. Clark, .	Dorchester, .	Chief engineer, .	"Harvard" (3,737 tons).
1900	Hollis M. Cornwall, .	Melrose, .	Chief engineer, .	"Persian" (2,677 tons).
1900	William Glover, .	Wilmington, .	Chief engineer, .	"J. H. Devereux" (1,618 tons).
1900	Norris R. Sibley, .	Worcester, .	Chief engineer, .	"Capt. Watson."
1900	Charles E. Lowe, .	Roxbury, .	Chief engineer, .	"Mackinaw" (2,578 tons).
1900	Elmer P. Butterworth, .	Foxborough, .	Chief engineer, .	"J. M. Guffey" (2,520 tons).
1901	Robert A. Patterson, .	Brighton, .	Chief engineer, .	"Solace" (5,700 tons).
1901	Eugene I. K. Murphy, .	Worcester, .	Chief engineer, .	Government vessel Panama Canal.



Graduated.	NAME.	Residence.	Position.	Vessel.
1902	Daniel F. Butler, . .	N. Easton, . .	Chief engineer, . .	"Gloria."
1904	Cecil L. McIntyre, . .	Upton, . .	Chief engineer, . .	-
1905	Walter C. Lockhart, . .	Wakefield, . .	Chief engineer, . .	"Abarenda" (6,705 tons).
1894	Herbert F. Bordman, . .	Charlestown, . .	First engineer, . .	"Admiral Dewey."
1895	Michael D. Sullivan, . .	Boston, . .	First engineer, . .	"Enterprise."
1896	Forrest H. McIntyre, . .	Gloucester, . .	First engineer, . .	"Daniel Millard."
1898	Frank P. Killion, . .	Malden, . .	First engineer, . .	"Kanai."
1898	Wm. E. Ballsdon, . .	Neponset, . .	First engineer, . .	"Jas. S. Whitney."
1898	Wilbur S. Lamont, . .	Leominster, . .	First engineer, . .	"Pocomoke."
1900	J. J. Donohue, . .	Cambridge, . .	First engineer, . .	"Oregon."
1900	James F. Rawdon, . .	Worcester, . .	First engineer, . .	"Tuscan."
1901	Frank A. Browne, . .	Westborough, . .	First engineer, . .	Isthmian Canal Commission.
1901	David W. Warren, . .	Everett, . .	First engineer, . .	"Newton."
1903	Edward A. Mercer, . .	Cambridge, . .	First engineer, . .	"Nero."
1904	Charles W. Bumpus, . .	Wakefield, . .	First engineer, . .	"Cape Ann."
1906	Augustus C. Caldwell, . .	Dorchester, . .	First engineer, . .	"Ajax."
1907	Samuel P. Osgood, . .	Middleborough, . .	First engineer, . .	"Bayport."
1907	George H. Stickney, . .	Worcester, . .	First engineer, . .	"Nanshan."
1895	Fred'k H. Stackpole, . .	Hyde Park, . .	Second engineer, . .	"City of Brockton."
1896	John O. Sargent, . .	Worcester, . .	Second engineer, . .	"St. Louis."
1897	Perley W. Kimpton, . .	Somerville, . .	Second engineer, . .	"Shawmut."
1898	Arthur P. Stevens, . .	Nantucket, . .	Second engineer, . .	"Ponce."
1900	Ressie E. Bowser, . .	N. Abington, . .	Second engineer, . .	"Nero."
1900	Earle P. Marshall, . .	N. Easton, . .	Second engineer, . .	"Uruguay."
1901	Sidney A. Maglathlin, . .	W. Bridgewater, . .	Second engineer, . .	"Arethusa."
1902	Augustus W. Hart, . .	N. Truro, . .	Second engineer, . .	"Chippewa."
1902	Ernest L. Saunders, . .	Brockton, . .	Second engineer, . .	"Justin."
1903	James S. McGarry, . .	Shrewsbury, . .	Second engineer, . .	"El Paso."
1905	Thomas W. Chisholm, . .	N. Billerica, . .	Second engineer, . .	"Arethusa."
1905	Charles F. Tarr, . .	Taunton, . .	Second engineer, . .	"Cæsar."
1905	Fred G. Carlton, . .	Maynard, . .	Second engineer, . .	"Navahoe."
1906	Victor M. Foster, . .	E. Boston, . .	Second engineer, . .	"Nacoochee."
1907	Archie E. Bragg, . .	New Bedford, . .	Second engineer, . .	Madison Line.
1907	Fred'k M. Coughlin, . .	N. Dartmouth, . .	Second engineer, . .	"Saturn."
1907	Philip B. Marcy, . .	Boston, . .	Second engineer, . .	"Oklahoma."
1908	Thomas B. Pellett, . .	Worcester, . .	Second engineer, . .	"Abarenda."
1909	Ervin L. Kelley, . .	Medford, . .	Second engineer, . .	"Anemone."
1910	Leslie S. Badger, . .	Dorchester, . .	Second engineer, . .	"Seaconnet."
1910	Geo. W. Sibley, . .	Worcester, . .	Second engineer, . .	"Grecian."
1903	Rudolph Komenda, . .	Somerville, . .	Third engineer, . .	"Hannibal."

Graduated.	NAME.	Residence.	Position.	Vessel.
1906	Bradford N. A. Gladding,	New Bedford,	Third engineer,	"Massachusetts."
1906	John C. Sheedy,	Malden,	Third engineer,	"Admiral Schley."
1906	Arthur A. Burbank,	Carver,	Third engineer,	"Prometheus."
1907	Joseph R. Wier,	Saundersville,	Third engineer,	"Brutus."
1908	Arthur E. Whiton,	Wakefield,	Third engineer,	"Justin."
1908	George H. Cameron,	Wakefield,	Third engineer,	"Orion."
1909	Fritz T. Kebler,	Rochdale,	Third engineer,	"Chippewa."
1909	Samuel J. Miller,	Fall River,	Third engineer,	"Proteus."
1909	Everett B. Ward,	Lynn,	Third engineer,	"Abarenda."
1910	Ernest B. Wyatt,	Wakefield,	Third engineer,	"Vulcan."
1911	Samuel D. White,	Hyannisport,	Third engineer,	"Everett."
1897	Lorenzo C. Farwell,	Dorchester,	1st Lieut., Eng., U. S. R. C. S.	"Manning."
1896	Webb C. Maglathlin,	Bridgewater,	2d Lieut., Eng., U. S. R. C. S.	"Yumacraw."
1897	Albert F. Patterson,	Townsend,	2d Lieut., Eng., U. S. R. C. S.	"Tuscarora."
1898	Joseph E. Sheedy,	Reading,	2d Lieut., Eng., U. S. R. C. S.	"Thetis."
1898	John T. Carr,	Malden,	2d Lieut., Eng., U. S. R. C. S.	"Gresham."
1906	Henry C. Roach,	New Bedford,	3d Lieut., Eng., U. S. R. C. S.	"Bear."
1907	Paul R. Smith,	Concord,	Cadet engineer,	School of Instruction, New London, Conn.
1895	Charles H. Lincoln,	Gloucester,	Marine surveyor,	Cleveland, Ohio.
1896	H. E. Kershaw,	Lawrence,	Machinist,	U. S. Navy.
1898	Herbert E. Fish,	Mattapoisett,	Chief machinist,	U. S. Navy.
1899	Leroy Neil,	Lynn,	Machinist,	"Patapseo."
1903	C. Allan Holbrook,	Marlborough,	Machinist,	"Idaho."
1913	Rutledge S. Goldthwait,	New Bedford,	Machinist,	"Anemone."
1900	Hugh H. McDonagh,	Worcester,	Electrician,	"Cæsar."
1902	John F. Murphy,	Worcester,	Electrician,	"Viper."
1903	Fred S. Garland,	Randolph,	Electrician,	"Alabama."
1903	Guy H. Hudson,	Somerville,	Electrician,	"Alabama."
1904	Charles A. Hill,	Melrose,	Electrician,	"Bay State."
1904	C. George Dyson,	Billerica,	Electrician,	"Delaware."
1905	Lawrence G. Kelley,	Taunton,	Electrician,	"Illinois."
1905	John F. Kinnaly,	S. Boston,	Electrician,	"Vermont."
1906	Carroll L. Morgan,	Beverly,	Wireless electrician.	San Juan, P. R.
1906	Louis H. Houghton,	Worcester,	Electrician,	"Missouri."
1906	William R. Dolan,	Worcester,	Chief electrician,	"Rhode Island."
1907	Eugene E. Chaney,	Arlington,	Electrician,	"North Dakota."
1907	Louis L. LaMontagne,	Millers Falls,	Electrician,	"Pilgrim."
1908	Fred'k W. Farquhar,	Lawrence,	Electrician,	"Relief."



Graduated.	NAME.	Residence.	Position.	Vessel.
1910	Eugene F. Stephenson, .	Spencer, . .	Electrician, . .	"Neptune."
1910	Howell S. Loundes, .	Worcester, .	Electrician, . .	"Georgia."
1910	Charles S. Hutchinson, .	Peabody, . .	Electrician, . .	"Alabama."
1911	Harvey M. Thorndike, .	Swampscott, .	Electrician, . .	"Ajax."
1911	Patrick S. Coakley, .	Malden, . .	Electrician, . .	"Montana."
1911	George L. Lockhart, .	Wakefield, .	Electrician, . .	"Cæsar."
1911	Walter P. Lynn, . .	Beverly, . .	Electrician, . .	"Alabama."

## CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1913, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Withdrawn, dismissed, dropped.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	
1893, . . . . .	138	-	138	-	-	-	29	-	29	24
1894, . . . . .	42	21	63	-	-	-	26	17	43	18
1895, . . . . .	33	38	71	19	19	38	6	6	12	6
1896, . . . . .	35	39	74	20	17	37	16	15	31	17
1897, . . . . .	32	41	73	20	21	41	10	10	20	9
1898, . . . . .	42	57	99	15	25	40	12	14	26	23
1899, . . . . .	34	45	79	11	12	23	24	17	41	11
1900, . . . . .	28	50	78	14	36	50	9	12	21	14
1901, . . . . .	34	37	71	11	18	29	8	12	20	16
1902, . . . . .	32	58	90	16	22	38	16	13	34	13
1903, . . . . .	34	52	86	17	14	31	10	15	25	17
1904, <sup>1</sup> . . . . .	-	-	60	16	29	45	5	12	17	31
1905, <sup>1</sup> . . . . .	-	-	65	10	10	20	-	-	9	13
1906, <sup>1</sup> . . . . .	-	-	50	16	19	35	-	-	18	19
1907, <sup>1</sup> . . . . .	-	-	60	10	15	25	-	-	17	26
1908, <sup>1</sup> . . . . .	-	-	45	8	9	17	-	-	9	9
1909, <sup>1</sup> . . . . .	-	-	81	14	22	36	-	-	7	16
1910, <sup>1</sup> . . . . .	-	-	54	6	15	21	-	-	16	15
1911, <sup>1</sup> . . . . .	-	-	69	20	23	43	-	-	7	18
1912, <sup>1</sup> . . . . .	-	-	57	17	16	33	-	-	14	15
1913, <sup>1</sup> . . . . .	-	-	79	21	19	40	-	-	20	8
	-	-	1,522	281	361	642	-	-	436	338

<sup>1</sup> Beginning in 1904, the cadets upon entrance are unclassified until their second year.

## MEMBERSHIP OF THE SCHOOL.

*Graduating Class, March, 1913.*

Balboni, Charles J.,	New Bedford.
Burt, Arthur G.,	New Bedford.
Crocker, John W.,	Marion.
Deneen, Joseph D.,	New Bedford.
Fanning, Philip J.,	Needham.
Fawcett, Joseph C.,	Dorchester.
Fletcher, Waldo A.,	Winthrop.
Fogarty, Edward J.,	East Boston.
Goldthwait, Rutledge S.,	New Bedford.
Hathaway, Albert G.,	East Mattapoisett.
Hodges, Alden L.,	Boston.
Howland, Frederick L.,	South Dartmouth.
Hughes, Alfred E.,	Canton.
Johnson, Albert W.,	Cambridge.
Laskey, Arnold A.,	Cambridge.
MacCabe, James A.,	Osterville.
Maddock, John A.,	Newburyport.
Peterson, Nils J.,	Brockton.
Rice, Paul S.,	Newton Centre.
Sullivan, George,	New Bedford.
Waldron, Philip H.,	Westborough.
Webster, Louis F.,	Cambridge.

*Graduating Class, October, 1913.*

Andrews, Firth B.,	Melrose.
Azevedo, Joseph F.,	North Dartmouth.
Bowman, James L.,	Westport.
Dearborn, Ralph W.,	Mansfield.
Lewis, Earle A.,	Woods Hole.
McIntire, Waldon A.,	East Gloucester.
McLay, Russell A.,	Lawrence.
Nelson, Frank H.,	Fall River.
Newell, Edward D.,	Gloucester.
Nichols, Gregory B.,	Danvers.
Peterson, Carl M.,	East Gloucester.
Senior, Wilfred H.,	Boston.
Shattuck, Oliver P.,	West Acton.
Stainforth, Frederick A.,	Winthrop.
Swinson, Everett O.,	East Gloucester.
Taggart, Elmer D.,	Wakefield.
Trowbridge, Joseph C., Jr.,	Stoughton.
Whitehead, Warren M.,	Reading.

*Class to graduate, March, 1914.*

Allen, Benjamin H., Jr.,	Lawrence.
Borden, Wilfred B.,	South Framingham.
Cashin, Ambrose J.,	Dorchester.
Davison, Harold J.,	Springfield.
Hubbel, Huelat N.,	Pittsfield.
Lee, Samuel J.,	Roxbury.
McCabe, Hugh V.,	Randolph.
Nutter, Nelson T.,	Newburyport.
O'Donoghue, Geoffrey C.,	Roxbury.
Orcutt, William H.,	Winthrop.
Peterson, C. Harold,	Norwood.
Reed, Ten Eyck H.,	South Framingham.
Severance, Leslie T.,	Cambridge.
Sweeney, James A.,	East Boston.
Tewksbury, Richard S.,	Winthrop.
Tucker, Charles P.,	Boston.
Turner, Joseph L.,	Dorchester.

*Class to graduate, October, 1914.*

Besse, Chester L.,	South Hanson.
Brewster, Fred H.,	Somerville.
Burton, Wesley H.,	Plainville.
Concannon, Joseph L.,	South Boston.
Crosby, Gerard R.,	Orleans.
Douglas, Herbert T.,	Somerville.
Fogarty, William H.,	Dorchester.
Francis, Joseph W.,	North Truro.
Gately, Grant,	Boston.
Gates, Samuel A.,	Malden.
Goodwin, Arthur C.,	Cambridge.
Harding, John L.,	Taunton.
Harrington, F. Palmer,	Malden.
Horton, Laurence L.,	Eastham.
Kirchner, John L.,	Hinsdale.
Murphy, Edward F., Jr.,	Fall River.
Poole, Lester B.,	Marlborough.
Ruggles, Henry S.,	Dorchester.
Stowell, James A.,	Walpole.
Swinson, David H.,	East Gloucester.
Wood, Orrin C.,	Winthrop.

*Class to graduate, March 1915.*

Benhard, Leo A., . . . . .	Boston.
Bonner, William J., . . . . .	East Boston.
Burns, Laurence E., . . . . .	Winthrop.
Case, Charles P., . . . . .	Winthrop Highl'ds.
Ciolkosz, Stanislaus P. J., . . . . .	Taunton.
Crane, Charles A., . . . . .	Winthrop.
Damon, Russell C., . . . . .	Quincy.
Davenport, William C., . . . . .	New Bedford.
Dresser, Revere W., . . . . .	Wollaston.
Fales, Curtis C., . . . . .	Westborough.
Gerecke, Bernhardt, . . . . .	Boston.
Goddard, Frank M., . . . . .	West Somerville.
Hartwell, Roy C., . . . . .	Boston.
Herron, Wilfred C., . . . . .	Lawrence.
Holmes, John, . . . . .	Campello.
Horan, George T., . . . . .	Nantucket.
Hovgaard, Arthur A., . . . . .	Brookline.
Hurley, Charles H., Jr., . . . . .	Westminster.
Jacobson, Charles P., . . . . .	Everett.
Lane, John A., . . . . .	Rockport.
Macomber, Chester A., . . . . .	Fall River.
Moore, Ralph S., . . . . .	Newton Highlands.
Rhodes, Edward R., . . . . .	Lowell.
Selleg, David F., . . . . .	East Northfield.
Snow, Lancy, . . . . .	Whitman.
Stevens, Clarence E., Jr. . . . .	West Barnstable.
Stewart, Roy, . . . . .	Everett.
Trask, Levi N., . . . . .	Boston.
Winquist, Arvid H., . . . . .	Jamaica Plain.

*Class to graduate, October, 1915.*

Bamforth, Charles N., . . . . .	Concord.
Barrett, Sherman J., . . . . .	Lawrence.
Busfield, Roger M., . . . . .	North Adams.
Comeau, Martin F., . . . . .	Belmont.
Craven, Harold, . . . . .	Lawrence.
Crichton, Reginald N., . . . . .	Boston.
Currie, Henry M., . . . . .	Charlestown.
Davis, Herbert L., . . . . .	East Walpole.
Delano, David P., . . . . .	Orleans.
Durney, Philip J., . . . . .	Gloucester.
Flagg, Osgood R., . . . . .	Southborough.
Ford, Ronald B., . . . . .	Lawrence.

Forte, Louis B., . . . . .	West Newton.
Gaughen, John J., . . . . .	South Boston.
Griffith, Charles E., . . . . .	North Cambridge.
Hammond, Earle D., . . . . .	East Mattapoisett.
Higgins, Arthur F., . . . . .	Lawrence.
Jones, Albert V., . . . . .	Fall River.
Kimball, William L., . . . . .	Orange.
Konrad, Leif H., . . . . .	Mattapan.
Linehan, Mark E., . . . . .	North Easton.
Marshall, Leland M., . . . . .	Revere.
Mayo, Herman S., . . . . .	Provincetown.
McCabe, George D., . . . . .	Randolph.
Nichols, Sidney F., . . . . .	Worcester.
Nickerson, Emory D., . . . . .	Chatham.
Nimmo, Frank L., . . . . .	Cambridge.
Pope, Charles, . . . . .	Springfield.
Rice, Warren E., . . . . .	Ashland.
Ryan, Thomas A, . . . . .	Brockton.
Saunders, Russell L., . . . . .	Boston.
Sexton, Evan S., . . . . .	Springfield
Sheridan, Edward B., . . . . .	Lowell.
Stanley, Edward S., . . . . .	Whitman.
Stewart, William H., . . . . .	Fall River.
Sullivan, Joseph B., . . . . .	South Boston.
Super, Clarence M., . . . . .	Hopkinton.
Waite, Frederick T., . . . . .	Winthrop.

## APPROPRIATIONS.

The appropriations for the school for the fiscal year 1913, from Dec. 1, 1912, to Nov. 30, 1913, are here accounted for as follows: —

*Current Expenses.*

Appropriation, . . . . .	\$62,000 00
Expended: —	
Pay roll, . . . . .	\$29,800 98
Provisions, . . . . .	15,069 80
Seamanship department, . . . . .	3,445 68
Engineering department, . . . . .	9,274 36
Instruction, . . . . .	624 19
Miscellaneous, . . . . .	3,766 91
Total amount expended, . . . . .	61,981 92
Balance unexpended, . . . . .	\$18 08

*Office Expenses.*

Appropriation,	\$6,000 00
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## Expended: —

Salaries,	\$3,011 06
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Advertising,	378 65
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Printing,	595 75
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Commissioners' expenses,	175 26
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Stationery and postage,	303 76
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Rent of office,	1,000 00
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Miscellaneous,	534 13
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Total amount expended,	5,998 61
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Balance unexpended,	\$1 39
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Respectfully submitted,

JOHN F. MERRY, *Chairman,*

REAR ADMIRAL, U. S. N. (RETIRED).

HON. JOHN READ, LATE U. S. N.

WILLIAM E. MCKAY.

BOSTON, Jan. 1, 1914.



## FEDERAL AND STATE LEGISLATION.

### AUTHORITY OF THE UNITED STATES.

H. R. 24145. APPROVED MARCH 4, 1911.

#### AN ACT FOR THE ESTABLISHMENT OF MARINE SCHOOLS, AND FOR OTHER PURPOSES.

That the Secretary of the Navy, to promote nautical education, is hereby authorized and empowered to furnish, upon the application in writing of the governor of a State, a suitable vessel of the navy, with all her apparel, charts, books, and instruments of navigation, provided the same can be spared without detriment to the naval service, to be used for the benefit of any nautical school, or school or college having a nautical branch, established at each of the following ports of the United States: Boston, Philadelphia, New York, Seattle, San Francisco, Baltimore, Detroit, Saginaw, Michigan, Norfolk, and Corpus Christi, upon the condition that there shall be maintained at such port a school or branch of a school for the instruction of youths in navigation, steamship-marine engineering, and all matters pertaining to the proper construction, equipment, and sailing of vessels or any particular branch thereof.

SECTION 2. That a sum not exceeding the amount annually appropriated by any State or municipality for the purpose of maintaining such a marine school or schools or the nautical branch thereof is hereby authorized to be appropriated for the purpose of aiding in the maintenance and support of such school or schools: *provided, however*, that appropriations shall be made for one school in any port heretofore named in section one and that the appropriation for any one year shall not exceed twenty-five thousand dollars for any one school.

SECTION 3. That the President of the United States is hereby authorized, when in his opinion the same can be done without detriment to the public service, to detail proper officers of the navy as superintendents of or instructors in such schools: *provided*, that if any such school shall be discontinued, or the good of the naval service shall require, such vessel shall be immediately restored to the Secretary of the Navy and the officers so detailed

recalled: *and provided further*, that no person shall be sentenced to or received at such schools as a punishment or commutation of punishment for crime.

SECTION 4. That all laws and parts of laws in conflict herewith are hereby repealed.

## AUTHORITY OF THE STATE OF MASSACHUSETTS.

CHAPTER 45, REVISED LAWS, AS AMENDED BY CHAPTER 171, ACTS OF 1903,  
AND CHAPTER 224, ACTS OF 1913.

### THE NAUTICAL SCHOOL.

SECTION 1. There shall be a board of commissioners of the Massachusetts nautical school consisting of three citizens of the commonwealth, one of whom shall annually, before the first day of July, be appointed by the governor, with the advice and consent of the council, for a term of three years from said first day of July.

SECTION 2. Said commissioners shall serve without compensation, but they shall be reimbursed by the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 3. They shall provide and maintain a nautical school for the instruction and training of pupils in the science and practice of navigation, shall provide accommodations for the school on board a proper vessel, purchase and provide books, stationery, apparatus and supplies needed in the work of the school, appoint and remove instructors and other necessary employees, determine their number and compensation, fix the terms and conditions upon which pupils shall be received and instructed in the school and be discharged or dismissed therefrom, establish all regulations necessary for its proper management and shall from time to time provide for cruises in or from the harbor of Boston.

SECTION 4. They may receive from the United States government, and use for the accommodation of the school, such vessels as the secretary of the navy may detail.

SECTION 5. They may annually expend such sum as the general court may from year to year appropriate, which shall be paid by the commonwealth; and they shall annually submit an estimate of the expense required in making cruises in or from the harbor of Boston, and the amount of said estimate, after approval by the governor and council and subject to the provisions of

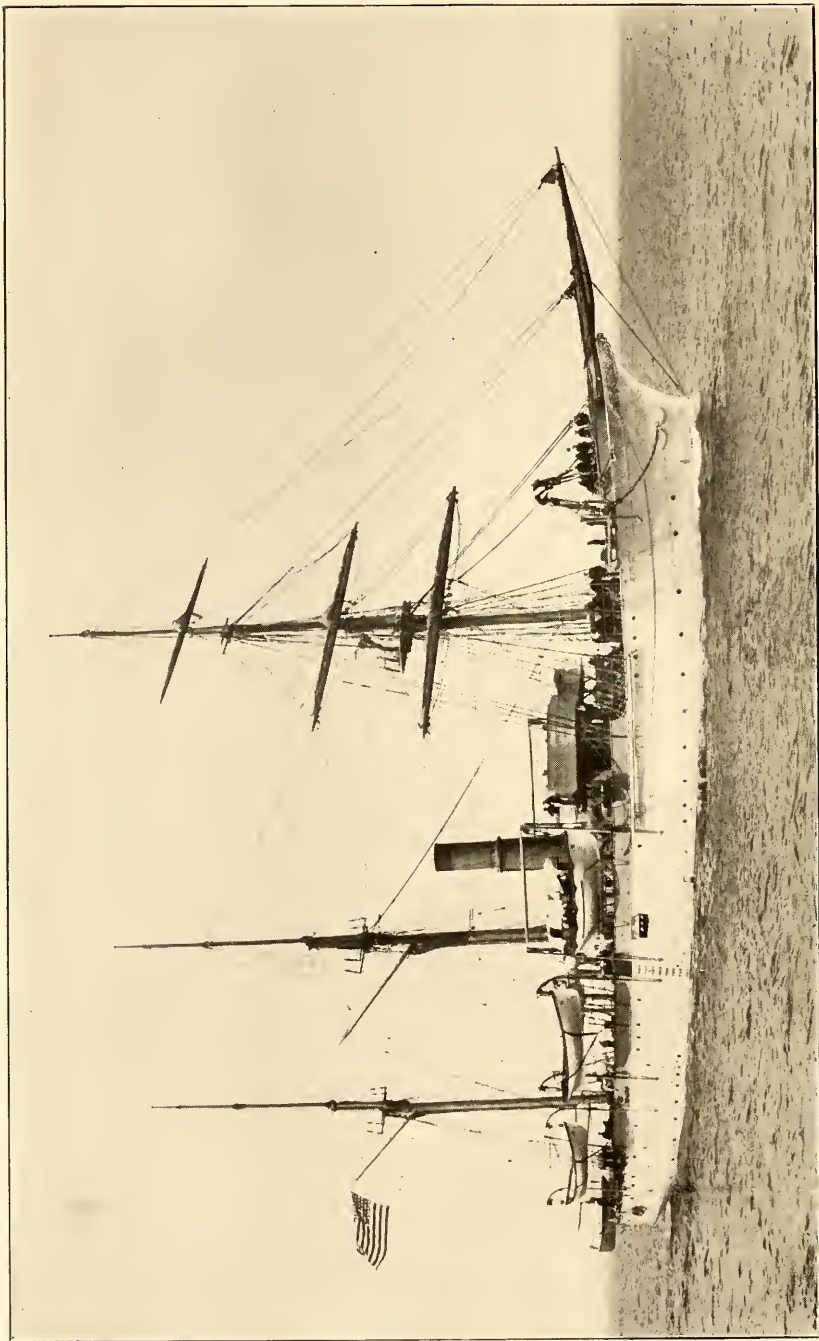
chapter six, shall be advanced to the commanding officer of the vessel detailed therefor, who shall give a bond in the sum of ten thousand dollars, with sureties approved by the governor and council, for its proper disbursement. Said advance shall not exceed ten thousand dollars for six months, and shall be accounted for by properly approved vouchers within thirty days after the termination of said cruises.

SECTION 6. They shall annually, in January, report to the general court a detailed statement of all moneys appropriated and expended during the preceding year for the nautical school, stating the results of the work during such year and making any necessary recommendations.









The Massachusetts Nautical Training Ship "Ranger" Leaving Boston Harbor on the Summer Cruise.



TWENTY-THIRD ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

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JANUARY 1, 1915



BOSTON  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS  
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1915

APPROVED BY  
THE STATE BOARD OF PUBLICATION.

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COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL  
2A PARK STREET, BOSTON

---

JOHN F. MERRY, *Chairman*

REAR ADMIRAL, U. S. N. (RETIRED)

HON. JOHN READ, LATE U. S. N.

WILLIAM E. MCKAY

---

WILLIAM H. DIMICK, *Secretary*



# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The commissioners have the honor to submit their report of the operations of the school for the year 1914.

### THE WORK IN GENERAL.

The Massachusetts Nautical School has had the most successful year in its history. The school has been filled to its total capacity — 104 cadets — with many on the waiting list. It is a matter for regret that many qualified applicants were unable to enter owing to the limited size of the “Ranger,” the ship now used by the school. The opening of the Panama Canal, the remarkable increase in the tonnage of American shipping, the demand for American vessels for export commerce, and the extensive Boston Harbor improvements, have all brought the merchant marine prominently before the public and called attention to the unusual opportunities for young men in that direction. In view of the increasing demands upon the school, the commissioners believe it is advisable to obtain, if possible, a larger and more modern ship from the national government to replace the “Ranger.” In addition to accommodating more cadets, a larger ship would provide the additional space needed for drills and practical work. A ship having lockers and berthing space for 140 students would be desirable.

The “Ranger” sailed from Boston on May 21 for a summer cruise in the North Atlantic. When about 900 miles off the



coast, in latitude  $38^{\circ} 30'$  north and longitude  $58^{\circ} 10'$  west, the crank shaft worked loose. Two days later, after it had been found that the difficulty was beyond temporary repairs, it was decided to discontinue the cruise. The return passage, under sail, and steaming when possible, occupied two weeks. The "Ranger" arrived in Boston on June 11 and proceeded to the navy yard. Upon examination by a Board of Survey ordered by the Navy Department, it was determined that a new crank shaft would be required. The old shaft was taken out of the ship and the "Ranger" was towed to Gloucester on June 27, where the work of the summer was continued without further interruption. Although it was necessary to make many changes in the summer term schedule to meet the new conditions with which the commissioners were unexpectedly confronted, the work of the school was maintained at the usual standard. A further delay of about one month beyond the specified time for the delivery of the new shaft made it impossible to make a cruise as planned. The summer term ended on October 15.

While the ship was at Gloucester, the superintendent delivered an address on "The American Merchant Marine" before the Gloucester Board of Trade and a class of young men of the Gloucester High School.

A special course of lectures on maritime quarantine practice was given on board the "Ranger" during the winter term. The lectures were given by Assistant Surgeon M. Victor Safford of the Public Health Service, and were without expense to the State. While elementary instruction and practical lessons in quarantine regulations are included in the curriculum, it was considered desirable that the cadets receive the benefit of the advanced instruction offered by Surgeon-General Rupert Blue as a part of the educational work on maritime quarantine matters of the Public Health Service.

The graduates of the school continue to make good progress in the merchant marine. The steamship "Cristobal," the first steamer to pass through the Panama Canal, was steered by a graduate of this school, and the second officer of the steamship "Peter H. Crowell," the first Boston steamer to pass through the Panama Canal, is a graduate of the school in the class of 1912.

A movement is in progress in San Francisco to establish a state nautical school in California. Information regarding the work and results of the Massachusetts Nautical School has been furnished to those interested in this movement.

#### THE STEAMBOAT INSPECTION LAWS.

In the commissioners' report for the year 1913 attention was called to the fact that many of our graduates are fully qualified to accept positions as third officers at the age of nineteen years, but they are prevented from doing so by the rules of the United States Steamboat Inspection Service. If the graduates with the required sea service who have attained to the age of nineteen years were, upon passing a satisfactory examination, granted a third officer's license, covering vessels of 3,000 tons or under, it would more promptly utilize the efficient training of the school, and would relieve the difficulty experienced by shipowners in obtaining competent third officers. In support of the proposition it was stated that in Great Britain candidates can present themselves for a second officer's license at the age of seventeen years, and, in order to compete effectively with the mercantile marine of other countries, our citizens should be given similar privileges of early promotion; a man otherwise qualified should not be delayed in the receipt of a third officer's license because he has not attained the age of twenty-one years. In Norway, young men who have reached the age of seventeen years and have had at least two years' service at sea are qualified to make application for a second mate's license. They can present themselves for examination for a first mate's license upon reaching the age of eighteen years and six months after having had three years and six months service at sea; at least twelve months of such service must be in foreign-going steamships. The chairman, accompanied by the superintendent of the school, presented the matter before the Board of Supervising Inspectors at Washington on February 26. The New York and Pennsylvania nautical schools have also urged the Board of Supervisors to take favorable action upon this proposition. The matter will be taken up again with the national supervisors at their next meeting.

## THE AMERICAN MERCHANT MARINE.

Three important events occurring during the year have had a marked effect upon the American merchant marine. The Panama Canal was opened to the general public on August 15, and, as was anticipated, a large trade is being developed between the ports on our Atlantic and Pacific seaboard. The commerce between the United States and the west coast of South America has also increased. From August 15 up to November 15, 278 vessels, aggregating 621,416 net tons, passed through the canal.

On Aug. 18, 1914, an amendment to the Panama Canal act became effective, allowing foreign built ships, owned by American citizens, to be admitted to American registry for deep-sea trade. Up to Dec. 24, 1914, 105 foreign vessels, aggregating 373,840 gross tons, had been admitted to American registry under this act. Probably at no time in the history of the country has our shipping increased with such rapidity as during the past six months. As the navigation laws which prescribe that officers on board American ships shall be American citizens have been suspended for seven years, the foreign officers on board these transferred ships can be retained for this period, but it is likely that vacancies will be filled with American officers. Graduates have recently been appointed officers on board three of these ships, the "Greenbrier," the "Robert Dollar" and the "Esparta."

The European war has abridged the activity of the German merchant marine, and many of the merchant vessels of Great Britain and France have been commandeered for military purposes. American ships are in great demand, and many of our coastwise ships are being chartered for foreign voyages.

## SUMMER TERM.

The following is from the report upon the annual cruise by Comdr. Charles N. Atwater, U. S. N., superintendent of the school:—

From June 13 to June 25, while the damaged crank shaft was being removed from the ship, the cadets were granted leave, as was also the case from October 15, when the summer term ended, to the opening of

the winter term on October 26. Furthermore, a number of the upper classmen were granted leave during August, to enable them to gain cruising experience by going on brief voyages in merchant vessels, and during this time several were employed as quartermasters of steamers. From June 27 to September 2 the work of the school was carried on in Gloucester harbor. During this period studies were pursued much as in the winter term, and the exceptional facilities of the port were taken advantage of to make the cadets good boatmen under oars and sails.

The pupils of the school are earnest in their desire to qualify themselves for the sea. The conduct of the cadets was, with very few exceptions, excellent, and their conduct and appearance ashore were commented upon by Gloucester citizens, who assured me that their favorable impression was general.

Although the cadets missed much of the usual practical experience only obtainable by regular cruising, their summer's work, including the 2,800 miles at sea during May and June, was not without beneficial results, which, in part, compensate them for their loss.

#### MARINE ENGINEERING.

In addition to the experience of the cadets in repairs and operation of a disabled main engine, they were instructed in the following: care and operation of direct-connected engines and dynamos, and repairs to circuits of same; examination and cleaning of evaporator and boilers; firing and water-tending. While in port they were given charge, under supervision, of the operation of the boilers and auxiliary machinery. While at the navy yard they were taken to shops and vessels and instructed in direct-drive turbines of the Parsons and Curtis types and on mixed sets of reciprocating engines and turbines, all of which were opened up at the time, giving them a thorough idea of their construction.

While lying at Gloucester and at the navy yard, class work was carried on in engineering problems, and in particular those which they are most likely to meet in practice.

#### COAL REPORT.

	Tons.
Coal on hand and received,	444.19
Expended,	371.10
Remaining,	73.09
Expended as follows:—	
Moving ship,	170.44
Dynamos and auxiliaries,	167.98
Distilling,	13 16
Galley,	17.88
Heating,	1.64
Total,	371.10

## MEDICAL DEPARTMENT.

From the beginning of the cruise in May until our return in September no member of the ship's crew was on the sick list. During that time 3 cadets were on the sick list, making a total of five days spent in the sick bay.

The routine spraying of the decks with a solution of formaldehyde has been apparently of marked value in preventing infectious diseases.

The weighing and measuring of cadets has yielded valuable information. Between December, 1913, and September, 1914, 9 cadets made gains of from 10 to 15 pounds each; 4 gained from 15 to 20 pounds, while 3 gained 28, 25 and 21 pounds, respectively. In the measurement of chest expansion 17 have a record of 3 to 4 inches and 8 are above 4 inches. One has a record of 5 inches expansion. The greatest physical improvement made by any cadet since coming to the school is as follows: weight increased from  $114\frac{1}{4}$  to  $149\frac{3}{4}$  pounds; height from 5 feet,  $6\frac{1}{2}$  inches to 5 feet,  $9\frac{1}{2}$  inches, and chest expansion from  $1\frac{3}{4}$  to  $3\frac{3}{4}$  inches.

## THE WINTER TERM.

The winter term commenced on October 26 with an enrollment of 104 cadets, representing fifty-five cities and towns in the State.

The following is the study schedule for the winter term of 1914-15:—



*Winter Schedule.*

	First Class, Seamanship.	Second Class, Seamanship.	First Class, Engineers.	Second Class, Engineers.	Third Class, First Section.	Third Class, Second Section.	Fourth Class, First Section.	Fourth Class, Second Section.
Monday	{ 9-10, . 10-11, . 11-20-12, 12-12.40, }	Study. Mathematics. Study. Navigation.	Steam. Study. Mathematics. Study.	Study. Steam. Study. Mathematics.	Navigation. Study. Seamanship. Study.	Study. Navigation. Study. Seamanship.	Seamanship. Study. Steam. English.	Study. Seamanship. English. Steam.
Tuesday	{ 9-10, . 10-11, . 11-20-12, 12-12.40, }	Navigation. Study. English. Study.	Steam. Study. Electricity. Study.	Study. Steam. Study. Electricity.	Electricity. Study. Steam. Study.	Study. Electricity. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Wednesday	{ 9-10, . 10-11, . 11-20-12, 12-12.40, }	Seamanship. Study. Navigation. Study.	English. Study. Electricity. Study.	Study. English. Study. Electricity.	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. English. Study.
Thursday	{ 9-10, . 10-11, . 11-20-12, 12-12.40, }	Navigation. Study. Mathematics. Study.	Steam. Study. English. Study.	Study. Steam. Study. English.	Seamanship. English. Steam. Study.	English. Seamanship. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Friday	{ 9-10, . 10-11, . 11-20-12, 12-12.40, }	Seamanship. Study. English. Study.	Mathematics. Study. Steam. Study.	Study. Mathematics. Study. Steam.	English. Study. Mathematics. Study.	Study. English. Study. Mathematics.	Electricity. Study. Seamanship. Study.	Study. Electricity. Study. Seamanship.

From 2 to 5 p.m., practical work and drills; from 7 to 8.30 p.m., evening study hours.

Persons interested in the work of the school are cordially invited to visit the "Ranger" on any day except Saturday or Sunday, when the cadets are absent on home leave.

The following are the officers and instructors now connected with the school: —

Superintendent and commanding officer, Comdr. Charles N. Atwater, U. S. N.

Executive officer, Lient. Alfred H. Miles, U. S. N.

Navigator, A. Russell Cushing (graduate M. N. S.).

Watch officer, Chief Boatswain Albert Seeckts, U. S. N.

Watch officer, Albert L. Ware (graduate M. N. S.).

Chief engineer, Machinist John O'Neill, U. S. N.

Medical officer, Gardner N. Cobb, M.D.

Paymaster and captain's clerk, Theodore C. Howe, U. S. N.

Electrician, Charles A. Scott.

#### PERSONNEL.

April 24, 1914, Lient. Alfred H. Miles, U. S. N., detached by the Navy Department.

April 30, 1914, Frank L. Downey, instructor in electricity, resigned.

May 1, 1914, Chief Boatswain Henry Hudson, U. S. N., appointed executive officer.

May 6, 1914, Boatswain John Atley, U. S. N., ordered to the ship as watch officer.

July 15, 1914, Chief Boatswain Henry Hudson, U. S. N., executive officer, detached by the Navy Department.

Sept. 19, 1914, C. A. Scott, appointed instructor in electricity.

Oct. 19, 1914, Lient. Alfred H. Miles, U. S. N., ordered to the "Ranger" as executive officer.

December 21, 1914, Boatswain John Atley, U. S. N., detached.

Dec. 21, 1914, Chief Boatswain Albert Seeckts, U. S. N., ordered to the ship as watch officer.



## REGISTER OF GRADUATES.

The following list includes some of the graduates who are following the sea; many names have been omitted on account of lack of space and there are others of whom the commissioners have no record.

Graduated.	NAME.	Residence.	Position.	Vessel.
1896	Alvin W. Haynes, .	Somerville, .	Pilot, . . .	Panama Canal.
1902	Osborne E. McKay, .	Provincetown, .	Pilot, . . .	Panama Canal.
1894	Henry G. Carpenter, <sup>1</sup>	Roxbury, .	Captain, . . .	"Frances Alice."
1894	James E. Reardon, .	Roxbury, .	Captain, . . .	"Santurce" (1,836 tons).
1895	George E. Eaton, .	Wakefield, .	Captain, . . .	"Anemone."
1896	Henry R. Bodge, .	Wollaston, .	Captain, . . .	"Northland" (3,282 tons).
1896	Wm. N. P. Baker, .	Dorchester, .	Captain, . . .	"Corozal" (3,063 tons).
1896	Geo. R. Lauriat, .	Medford, .	Captain, . . .	"Timothy Pickering."
1897	Fred'k A. Sparks, .	Provincetown, .	Captain, . . .	"Machigonne."
1897	Willis Howes, . . .	S. Yarmouth, .	Captain, . . .	"El Aguile." "
1897	Emery Rice, . . .	Brighton, .	Captain, . . .	"Mongolia" (13,658 tons).
1898	Louis E. Congdon, .	Boston, .	Captain, . . .	"Colorado" (2,764 tons).
1898	Carl E. A. Anderson, .	Roslindale, .	Captain, . . .	"Virginian" (7,914 tons).
1899	Richard T. Blackford, .	Marblehead, .	Captain, . . .	"Jessie Costa."
1900	William B. Knight, .	Hull, .	Captain and pilot,	"Bertha."
1900	James S. Howes, .	Woods Hole, .	Captain, . . .	"Alleghany" (1,704 tons).
1901	Theodore H. Bicknell, .	Melrose, .	Captain, . . .	"Herman Frasch" (3,803 tons).
1902	Herman T. Parker, .	Rockport, .	Captain, . . .	"Itasca" (1,416 tons).
1902	Arthur T. Luther, .	Swansea, .	Captain, . . .	"Empire."
1903	Nicholas J. Kane, .	Whitman, .	Captain, . . .	"Panaman" (6,649 tons).
1904	John F. Williamson, .	Brockton, .	Captain, . . .	"Myrtle."
1904	Andrew J. Iverson, .	Salem, .	Captain, . . .	Yacht "Virginian."
1906	George C. Bosson, .	Reading, .	Captain, . . .	Yacht "Traveler."
1908	Eugene P. Shevlin, .	E. Boston, .	Captain, . . .	"Gardenia."
1895	Walter J. Healey, .	Worcester, .	First officer, .	"Zulia."
1897	Chas. W. Clift, .	Whitman, .	First officer, .	"Gen. E. O. C. Ord."
1898	Harlowe Johnson, .	Mattapoisett, .	First officer, .	"Parthian."
1898	Eldon G. Freeman, .	Whitman, .	First officer, .	"Sequoia."
1899	Edward G. Smith, .	Boston, .	First officer, .	"Minnesotan."
1900	Alfred M. Cummings, .	Worcester, .	First officer, .	"Proteus."
1900	E. Newton Parker, .	Greenfield, .	First officer, .	"Nero."
1901	Robert W. Tucker, .	Kendal Green, .	First officer, .	"Kansan."

<sup>1</sup> Transferred.

Graduated.	NAME.	Residence.	Position.	Vessel.
1901	Chas. D. Harrington,	Cambridge,	First officer,	"Mascotte."
1902	Fred C. Seibert,	Greenfield,	First officer,	"Proteus."
1902	William I. O'Reilly,	S. Boston,	First officer,	"Queen."
1902	Edwin J. Madden,	Everett,	First officer,	"St. Louis."
1903	Robert B. Powers,	Brockton,	First officer,	"Cyclops."
1905	Fred'k S. Walker,	Dorchester,	First officer,	"Newton."
1905	James A. Crocker,	Nahant,	First officer,	"Frederick."
1905	Harry W. Maynard,	Winthrop,	First officer,	"Sumac."
1908	Ernest F. Robinson,	E. Boston,	First officer,	"Sterling."
1909	Carroll E. Higgins,	Somerville,	First officer,	American-Hawaiian Line.
1910	Chester R. Morris,	Springfield,	First officer,	"Myrtle."
1898	Charles H. Kilmer,	Somerville,	Second officer,	"Leonidas."
1899	Walter S. Lynch,	Chelsea,	Second officer,	"Liberty."
1900	Joseph E. Gately,	Marlborough,	Second officer,	"Monroe."
1901	John J. Coholan,	S. Boston,	Second officer,	"Malden."
1902	Arthur Jenson,	Provincetown,	Second officer,	"Nereus."
1902	Harry E. Boesch,	Wakefield,	Second officer,	"Momus."
1902	Wm. M. Chisholm,	N. Attleboro',	Second officer,	-
1903	Harold C. Rideout,	Concord,	Second officer,	"Comus."
1903	Benj. Connell,	Peabody,	Second officer,	"Philadelphia."
1904	Leslie F. Holmes,	E. Whitman,	Second officer,	"Antilles."
1906	Wm. H. Lee,	Roxbury,	Second officer,	"Arethusa."
1907	Harry L. Chick,	Beverly,	Second officer,	"Nanshan."
1907	Elmer B. Small,	N. Truro,	Second officer,	"Justin."
1907	Walter L. Smith,	Ashburnham,	Second officer,	"Oregonian."
1907	William M. Gifford,	Woods Hole,	Second officer,	"Cyclops."
1908	Edw. S. Ells, Jr.,	Cambridge,	Second officer,	"Abarenda."
1909	Eric E. Winquist,	Jamaica Plain,	Second officer,	"Proteus."
1909	Robert S. Sparrow,	Eastham,	Second officer,	"Washingtonian."
1909	Harold C. Cooper,	Worcester,	Second officer,	"Sterling."
1910	Franklin K. Tyler,	Beachmont,	Second officer,	"Geo. E. Warren."
1911	Eugene W. Miller,	E. Saugus,	Second officer,	"Minnesota."
1911	Chas. F. Fornason,	Gloucester,	Second officer,	"St. Paul."
1911	Harold S. Dexter,	Mattapoisett,	Second officer,	"Jason."
1912	Wm. A. Hamilton,	Cliftondale,	Second officer,	"Cæsar."
1912	Robert M. Gray,	Mel. Highlands,	Second officer,	"Peter H. Crowell."
1912	Alex. G. Perkins, Jr.,	Newburyport,	Second officer,	"Greenbrier."
1906	Wm. A. Manchester,	Campello,	Third officer,	"Nanshan."
1909	Wm. A. Sillars,	Danvers,	Third officer,	"Abarenda."

Graduated.	NAME.	Residence.	Position.	Vessel.
1911	Henry O. K. Hanson,	Neponset,	Third officer,	"George E. Warren."
1911	Fred'k J. Shaw,	Cambridge,	Third officer,	"Nereus."
1911	Raymond C. Vose,	Cambridge,	Third officer,	"Nacoochee."
1911	Wesley F. Besse,	S. Hanson,	Third officer,	"Robert Dollar."
1912	Clarence L. Howard,	Auburndale,	Third officer,	"Cæsar."
1912	Edw. A. Moore, Jr.,	Forest Hills,	Third officer,	"Solace."
1912	Ralph E. Merithew,	Haverhill,	Third officer,	"Carolina."
1912	Jos. M. Daniel,	Osterville,	Third officer,	"Montoso."
1912	Harold Ertel,	Longmeadow,	Third officer,	"Esparta."
1902	A. Russell Cushing,	Dorchester,	Navigating officer,	"Ranger."
1911	Albert L. Ware,	Cambridge,	Watch officer,	"Ranger."
1898	Joseph E. Sheedy,	Reading,	General superintendent.	Inter-Island Navigation Company.
1898	George F. Waite,	Winthrop,	Chief inspector of steamboats.	Providence, R. I.
1898	Clarence E. Wood,	Fall River,	Lieut.,	U. S. Navy.
1907	Thomas Baxter,	S. Dennis,	Ensign,	U. S. Navy.
1895	Philip W. Lauriat,	Medford,	1st Lieut., U. S. R. C. S.	"Algonquin."
1899	James A. Alger,	Reading,	1st Lieut., U. S. R. C. S.	"McCulloch."
1900	John F. McGourty,	Worcester,	2d Lieut., U. S. R. C. S.	Instructor revenue cutter.
1906	William F. Towle,	Boston,	2d Lieut., U. S. R. C. S.	Academy.
1896	Charles S. Young,	Boston,	Nautical expert,	Navy Department.
1897	Fred'k W. Jones,	Winchester,	Nautical expert,	Navy Department.
1900	Gershom Bradford,	Duxbury,	Nautical expert,	Navy Department.
1911	Charles C. Plummer,	Cambridge,	Nautical expert,	Navy Department.
1904	Edward C. Roberts,	Beverly,	1st Lieut.,	Philippine R. C. S.
1906	Clarence E. Nutting,	Cambridge,	1st Lieut.,	U. S. Marine Corps.
1903	Leander A. Clapp,	Brockton,	2d Lieut.,	U. S. Marine Corps.
1894	Horace W. Folger, <sup>1</sup>	Wilmington,	Pilot,	Boston Pilot Boat Service.
1900	I. Clarence Bailey,	Kingston,	Pilot,	Boston Pilot Boat Service.
1897	Orison W. Woodbury,	Lynn,	Mate,	"Ellesmere."
1897	Edwin F. Darling,	W. Dennis,	2d Mate,	"Dorothy Bradford."
1912	John W. Thompson,	Marion,	Cadet officer,	"Tulip."
1912	Herbert A. Burns,	New Bedford,	Cadet officer,	"Sunflower."
1895	Geo. A. Faulkner,	Roxbury,	Keeper,	Cape Cod Light.
1896	Jas. H. B. Meehan,	Lowell,	Chief engineer,	"Proteus" (19,000 tons).
1896	Christopher W. Soreuson,	Somerville,	Chief engineer,	"Nassau."
1897	Augustus T. Holmes,	Ipswich,	Chief engineer,	"J. M. Guffey" (2,520 tons).
1898	Charles E. Rowe,	Lynn,	Chief engineer,	"Ajax" (9,250 tons).
1898	John C. Ganser,	Jamaica Plain,	Chief engineer,	"Caribbean" (2,800 tons).
1898	Everett S. Ransom,	Mattapoisett,	Chief engineer,	"Parthenia."

<sup>1</sup> Transferred.

Graduated.	NAME.	Residence.	Position.	Vessel.
1899	Frank B. Davis, . . .	Dorchester, . . .	Chief engineer, . .	"Olivette" (1,678 tons).
1899	Forrest D. Clark, . . .	Dorchester, . . .	Chief engineer, . .	"Harvard" (3,737 tons).
1900	Hollis M. Cornwall, . . .	Melrose, . . .	Chief engineer, . .	"Persian" (2,677 tons).
1900	William Glover, . . .	Wilmington, . . .	Chief engineer, . .	"J. H. Devereux" (1,618 tons).
1900	Norris R. Sibley, . . .	Worcester, . . .	Chief engineer, . .	"Col. Wikoff."
1900	Charles E. Lowe, . . .	Roxbury, . . .	Chief engineer, . .	"Mackinaw" (2,578 tons).
1900	Elmer P. Butterworth, . .	Foxborough, . . .	Chief engineer, . .	"J. M. Guffey" (2,520 tons).
1901	Robert A. Patterson, . .	Brighton, . . .	Chief engineer, . .	"Solace." (5,700 tons).
1901	David W. Warren, . . .	Everett, . . .	Chief engineer, . .	"Everett" (3,238 tons).
1901	Eugene I. K. Murphy, . .	Worcester, . . .	Chief engineer, . .	Government vessel, Panama Canal.
1902	Daniel F. Butler, . . .	N. Easton, . . .	Chief engineer, . .	"Gloria."
1904	Cecil L. McIntyre, . . .	Upton, . . .	Chief engineer, . .	-
1905	Walter C. Lockhart, . . .	Wakefield, . . .	Chief engineer, . .	"Abarenda" (6,705 tons).
1895	Michael D. Sullivan, . .	Boston, . . .	First engineer, . .	"Enterprise."
1896	Forrest H. McIntyre, . .	Gloucester, . . .	First engineer, . .	"Daniel Millard."
1898	Frank P. Killion, . . .	Malden, . . .	First engineer, . .	"Kanai."
1898	Wm. E. Ballsdon, . . .	Neponset, . . .	First engineer, . .	"Jas. S. Whitney."
1898	Wilbur S. Lamont, . . .	Leominster, . . .	First engineer, . .	"Pocomoke."
1900	J. J. Donohue, . . .	Cambridge, . . .	First engineer, . .	"Oregon."
1900	James F. Rawdon, . . .	Worcester, . . .	First engineer, . .	"Tuscan."
1901	Frank A. Browne, . . .	Westborough, . . .	First engineer, . .	Isthmian Canal Commission.
1903	Edward A. Mercer, . . .	Cambridge, . . .	First engineer, . .	"Nero."
1903	James S. McGarry, . . .	Shrewsbury, . . .	First engineer, . .	"Creole."
1904	Charles W. Bumpus, . . .	Wakefield, . . .	First engineer, . .	"Cape Ann."
1904	Edw. J. Chadbourne, . .	Reading, . . .	First engineer, . .	"Henry F. Dimock."
1905	Fred G. Carlton, . . .	Maynard, . . .	First engineer, . .	"Onondaga."
1905	Charles F. Tarr, . . .	Taunton, . . .	First engineer, . .	"Cyclops."
1906	Augustus C. Caldwell, . .	Dorchester, . . .	First engineer, . .	"Ajax."
1906	Bradford N. A. Gladding, .	New Bedford, . .	First engineer, . .	"Solace."
1907	George H. Stickney, . . .	Worcester, . . .	First engineer, . .	"Nanshan."
1895	Fred'k H. Stackpole, . .	Hyde Park, . . .	Second engineer, . .	"City of Brockton."
1896	John O. Sargent, . . .	Worcester, . . .	Second engineer, . .	"St. Louis."
1897	Perley W. Kimpton, . . .	Somerville, . . .	Second engineer, . .	"Shawmut."
1898	Arthur P. Stevens, . . .	Nantucket, . . .	Second engineer, . .	"Ponce."
1900	Ressie E. Bowser, . . .	N. Abington, . . .	Second engineer, . .	"Nero."
1900	Earle P. Marshall, . . .	N. Easton, . . .	Second engineer, . .	"Uruguay."
1901	Sidney A. Maglathlin, . .	W. Bridgewater, . .	Second engineer, . .	"Arethusa."
1902	Augustus W. Hart, . . .	N. Truro, . . .	Second engineer, . .	"Chippewa."
1902	Ernest L. Saunders, . . .	Brockton, . . .	Second engineer, . .	"Justin."

Graduated.	NAME.	Residence.	Position.	Vessel.
1905	Thomas W. Chisholm,	N. Billerica,	Second engineer,	"Arethusa."
1906	Victor M. Foster,	E. Boston,	Second engineer,	"Nacoochee."
1906	Arthur A. Burbank,	Carver,	Second engineer,	"Hector."
1907	Archie E. Bragg,	New Bedford,	Second engineer,	"Orion."
1907	Fred'k M. Coughlin,	N. Dartmouth,	Second engineer,	"Saturn."
1907	Jos. R. Wier,	Saundersville,	Second engineer,	"Nero."
1908	Thomas B. Pellett,	Worcester,	Second engineer,	"Abarenda."
1909	Samuel J. Miller,	Fall River,	Second engineer,	"Brutus."
1909	Ervin J. Kelley,	Medford,	Second engineer,	"Anemone."
1910	Leslie S. Badger,	Dorchester,	Second engineer,	"Seaconnet."
1910	Geo. W. Sibley,	Worcester,	Second engineer,	"Grecian."
1913	Russell A. McLay,	Lawrence,	Second engineer,	"Melrose."
1903	Rudolph Komenda,	Somerville,	Third engineer,	"Hannibal."
1908	Arthur E. Whiton,	Wakefield,	Third engineer,	"Justin."
1908	George H. Cameron,	Wakefield,	Third engineer,	"Orion."
1909	Fritz T. Kebler,	Rochdale,	Third engineer,	"Onondaga."
1909	Everett B. Ward,	Lynn,	Third engineer,	"Abarenda."
1910	Ernest B. Wyatt,	Wakefield,	Third engineer,	"Vulcan."
1911	Geo. L. Lockhart,	Wakefield,	Third engineer,	"Orion."
1911	Samuel D. White,	Hyannisport,	Third engineer,	"Everett."
1912	Louis H. Racicot,	Lowell,	Third engineer,	"Jason."
1912	Walter L. Brewster,	Somerville,	Third engineer,	—
1913	Earle A. Lewis,	Woods Hole,	Third engineer,	—
1897	Lorenzo C. Farwell,	Dorchester,	1st Lieut., Eng., U. S. R. C. S.	"Manning."
1896	Webb C. Maglathlin,	Bridgewater,	2d Lieut., Eng., U. S. R. C. S.	"Yumacraw."
1897	Albert F. Patterson,	Townsend,	2d Lieut., Eng., U. S. R. C. S.	"Alert."
1898	John T. Carr,	Malden,	2d Lieut., Eng., U. S. R. C. S.	"Gresham."
1906	Henry C. Roach,	New Bedford,	3d Lieut., Eng., U. S. R. C. S.	"McCulloch."
1907	Paul R. Smith,	Concord,	3d Lieut., Eng., U. S. R. C. S.	"Algonquin."
1895	Charles H. Lincoln,	Gloucester,	Marine surveyor,	Cleveland, Ohio.
1898	Herbert E. Fish,	Mattapoisett,	Chief machinist,	U. S. Navy.
1896	H. E. Kershaw,	Lawrence,	Machinist,	U. S. Navy.
1903	C. Allan Holbrook,	Marlborough,	Machinist,	"Idaho."
1900	Hugh H. McDonagh,	Worcester,	Electrician,	"Cæsar."
1902	John F. Murphy,	Worcester,	Electrician,	"Viper."
1903	Fred S. Garland,	Randolph,	Electrician,	"Alabama."
1903	Guy H. Hudson,	Somerville,	Electrician,	"Alabama."
1904	Charles A. Hill,	Melrose,	Electrician,	"Bay State."
1904	C. George Dyson,	Billerica,	Electrician,	"Delaware."

Graduated.	NAME.	Residence.	Position.	Vessel.
1905	Lawrence G. Kelley, . .	Taunton, . .	Electrician, . .	"Illinois."
1905	John F. Kinnaly, . .	S. Boston, . .	Electrician, . .	"Vermont."
1906	Carroll L. Morgan, . .	Beverly, . .	Navy wireless electrician.	San Juan, P. R.
1906	Louis H. Houghton, . .	Worcester, . .	Electrician, . .	"Missouri."
1906	William R. Dolan, . .	Worcester, . .	Chief electrician,	Norfolk, Va., Radio Station.
1907	Eugene E. Chaney, . .	Arlington, . .	Electrician, . .	"North Dakota."
1907	Louis L. LaMontagne, . .	Millers Falls, . .	Electrician, . .	"Pilgrim."
1910	Howell S. Loundes, . .	Worcester, . .	Electrician, . .	"Georgia."
1910	Charles H. Hutchinson, . .	Peabody, . .	Electrician, . .	"Sacramento."
1911	Harvey M. Thorndike, . .	Swampscott, . .	Electrician, . .	"Ajax."
1911	Patrick S. Coakley, . .	Malden, . .	Electrician, . .	"Maine."
1911	Walter P. Lynn, . .	Beverly, . .	Electrician, . .	"Alabama."



## CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1914, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Number connected with the School.
	Sea-manship Class.	Engineer Class.	Totals.	Sea-manship Class.	Engineer Class.	Totals.	Sea-manship Class.	Engineer Class.	Totals.	
1893, . . . . .	138	-	138	-	-	-	29	-	29	138
1894, . . . . .	42	21	63	-	-	-	26	17	43	156
1895, . . . . .	33	38	71	19	19	38	6	6	12	156
1896, . . . . .	35	39	74	20	17	37	16	15	31	174
1897, . . . . .	32	41	73	20	21	41	10	10	20	165
1898, . . . . .	42	57	99	15	25	40	12	14	26	194
1899, . . . . .	34	45	79	11	12	23	24	17	41	184
1900, . . . . .	28	50	78	14	36	50	9	12	21	186
1901, . . . . .	37	71	108	11	18	29	8	12	20	172
1902, . . . . .	32	58	90	16	22	38	16	18	34	197
1903, . . . . .	34	32	66	17	14	31	10	15	25	178
1904, . . . . .	-	-	60	16	29	45	5	12	17	165
1905, . . . . .	-	-	65	10	10	20	-	-	9	137
1906, . . . . .	-	-	50	16	19	35	-	-	18	145
1907, . . . . .	-	-	60	10	15	25	-	-	17	133
1908, . . . . .	-	-	45	8	9	17	-	-	9	110
1909, . . . . .	-	-	81	14	22	36	-	-	7	156
1910, . . . . .	-	-	54	6	15	21	-	-	16	151
1911, . . . . .	-	-	69	20	23	43	-	-	16	168
1912, . . . . .	-	-	57	17	16	33	-	-	14	157
1913, . . . . .	-	-	69	21	19	40	-	-	20	174
1914, . . . . .	-	-	65	20	16	36	-	-	22	171
	-	-	1,587	301	377	678	-	-	458	345

<sup>1</sup> Beginning in 1904, the cadets upon entrance are unclassified until their second year.



## MEMBERSHIP OF THE SCHOOL.

*Graduating Class, March, 1914.*

Allen, Benjamin H., Jr.,	. . . . .	Lawrence.
Borden, Wilfred B.,	. . . . .	South Framingham.
Cashin, Ambrose J.,	. . . . .	Dorchester.
Davison, Harold J.,	. . . . .	Springfield.
Hubbel, Huelat N.,	. . . . .	Pittsfield.
Lee, Samuel J.,	. . . . .	Roxbury.
McCabe, Hugh V.,	. . . . .	Randolph.
Nutter, Nelson T.,	. . . . .	Newburyport.
O'Donoghue, Geoffrey C.,	. . . . .	Roxbury.
Orcutt, William H.,	. . . . .	Winthrop.
Peterson, Carl H.,	. . . . .	Norwood.
Reed, Ten Eyck H.,	. . . . .	South Framingham.
Severance, Leslie T.,	. . . . .	Cambridge.
Sweeney, James A.,	. . . . .	East Boston.
Tewksbury, Richard S.,	. . . . .	Winthrop.
Tucker, Charles P.,	. . . . .	Boston.
Tuell, Borden A.,	. . . . .	New Bedford.
Turner, Joseph L.,	. . . . .	Amherst.

*Graduating Class, October, 1914.*

Brewster, Fred H.,	. . . . .	Somerville.
Burton, Wesley H.,	. . . . .	Plainville.
Concannon, Joseph L.,	. . . . .	South Boston.
Crosby, Gerard R.,	. . . . .	Orleans.
Douglas, Herbert T.,	. . . . .	Somerville.
Fogarty, William H.,	. . . . .	Dorchester.
Francis, Joseph W.,	. . . . .	North Truro.
Gately, Grant,	. . . . .	Cambridge.
Gates, Samuel A.,	. . . . .	Malden.
Goodwin, Arthur C.,	. . . . .	Cambridge.
Harrington, F. Palmer,	. . . . .	Malden.
Horton, Laurence L.,	. . . . .	Eastham.
Kirchner, John L.,	. . . . .	Hinsdale.
Murphy, Edward F., Jr.,	. . . . .	Fall River.
Poole, Lester B.,	. . . . .	Marlborough.
Ruggles, Henry S.,	. . . . .	Dorchester.
Stowell, James A.,	. . . . .	Walpole.
Swinson, David H.,	. . . . .	East Gloucester.

*Class to graduate, March, 1915.*

Benhard, Leo A., . . . . .	Boston.
Bonner, William J., . . . . .	East Boston.
Burns, Laurence E., . . . . .	Winthrop.
Ciolkosz, Stanislaus P. J., . . . . .	Taunton.
Damon, Russell C., . . . . .	Quincy.
Davenport, William C., . . . . .	New Bedford.
Fales, Curtis C., . . . . .	Westborough.
Gerecke, Bernhardt, . . . . .	Boston.
Hartwell, Roy C., . . . . .	Boston.
Herron, Wilfred C., . . . . .	Lawrence.
Holmes, John, . . . . .	Campello.
Horan, George T., . . . . .	Nantucket.
Hovgaard, Arthur A., . . . . .	Brookline.
Hurley, Charles H., Jr., . . . . .	Westminster.
Jacobson, Charles P., . . . . .	Everett.
Moore, Ralph S., . . . . .	Newton.
Rhodes, Edward R., . . . . .	Lowell.
Stevens, Clarence E., Jr. . . . .	West Barnstable.
Stewart, Roy, . . . . .	Everett.
Winqvist, Arvid H., . . . . .	Jamaica Plain.

*Class to graduate, October, 1915.*

Bamforth, Charles N., . . . . .	Concord.
Barrett, Sherman J., . . . . .	Lawrence.
Comeau, Martin F., . . . . .	Belmont.
Craven, Harold, . . . . .	Lawrence.
Delano, David P., . . . . .	Orleans.
Durney, Philip J., . . . . .	Gloucester.
Flagg, Osgood R., . . . . .	Southborough.
Ford, Ronald B., . . . . .	Lawrence.
Forte, Louis B., . . . . .	West Newton.
Gaughen, John J., . . . . .	South Boston.
Griffith, Charles E., . . . . .	North Cambridge.
Hammond, Earle D., . . . . .	East Mattapoisett.
Higgins, Arthur F., . . . . .	Lawrence.
Jones, Albert V., . . . . .	Fall River.
Konrad, Leif H., . . . . .	Mattapan.
Linehan, Mark E., . . . . .	North Easton.
Marshall, Leland M., . . . . .	Revere.
Mayo, Herman S., . . . . .	Provincetown.
Nichols, Sidney F., . . . . .	Worcester.
Nimmo, Frank L., . . . . .	Cambridge.
Pope, Charles, . . . . .	Springfield.
Rice, Warren E., . . . . .	Ashland.

Saunders, Russell L., . . . . .	Boston.
Sheridan, Edward B., . . . . .	Lowell.
Stanley, Edward S., . . . . .	Whitman.
Waite, Frederick T., . . . . .	Winthrop.

*Class to graduate, March, 1916.*

Berglund, C. Edwin, . . . . .	Brockton.
Congdon, Harold R., . . . . .	Boston.
Dean, Ira D., . . . . .	South Natick.
Doane, Harvey A., . . . . .	Malden.
Elder, Randall F., . . . . .	East Boston.
Gorman, Paul, . . . . .	Haverhill.
Harrington, George E., . . . . .	Worcester.
Jakmauh, Peter J., . . . . .	South Boston.
Lynch, James L., . . . . .	Roslindale.
Mahoney, J. Prescott, . . . . .	West Wareham.
Marshall, John H., . . . . .	Wilmington.
Martell, Charles A., . . . . .	Somerville.
Perrin, Frank M., . . . . .	Worcester.
Phillips, Alexander J., . . . . .	Easton.
Reed, Carelton G., . . . . .	Lexington.
Roddy, John P., . . . . .	Fitchburg.
Rylander, John A., . . . . .	Springfield.
Simmons, John W., . . . . .	Springfield.
Stevens, Percy C., . . . . .	West Barnstable.
Thomas, William W., . . . . .	Randolph.
Upton, John, . . . . .	Upton.
Wadleigh, George E., . . . . .	Boston.

*Class to graduate, October, 1916.*

Bain, Joseph A., . . . . .	Lawrence.
Beauvais, Waldo H., . . . . .	Worcester.
Bianchi, Albert, . . . . .	Worcester.
Browne, Paul H., . . . . .	Roslindale.
Chase, Howard U., . . . . .	Nantucket.
Collins, Clayton W., . . . . .	Waquoit.
Condrey, Joseph P., . . . . .	Lowell.
Crowell, John T., Jr., . . . . .	Gloucester.
Dunphe, Richard H., . . . . .	Brockton.
Erickson, John, . . . . .	New Bedford.
Fickett, Edward, . . . . .	East Boston.
Fletcher, Edwin T., . . . . .	Springfield.
Gallishaw, Frank L., . . . . .	Cambridge.
Graham, Austin P., Jr., . . . . .	Everett.
Guba, Henry A., . . . . .	New Bedford.

Gurney, Darrough S., . . . . .	Marion.
Hutchinson, Leanord H., . . . . .	Georgetown.
Ireland, Harold S., . . . . .	Somerville.
Kenney, Arthur J., . . . . .	Brookline.
Lord, William E., . . . . .	Springfield.
Lufkin, Thomas B., . . . . .	Gloucester.
Millin, Anthony P., . . . . .	Ipswich.
O'Sullivan, N. Eugene, . . . . .	Winchester.
Paine, Byron H., . . . . .	New Bedford.
Pease, Elmer F., . . . . .	Nantucket.
Pilkington, John E., . . . . .	Mansfield.
Polansky, Isaac, . . . . .	Salem.
Preston, William K., . . . . .	Beverly.
Ross, Archie D., . . . . .	Dorchester.
Sanford, Harold W., . . . . .	Springfield.
Smith, Royce W., . . . . .	Boston.
Standley, Richard A., . . . . .	Beverly.
Stanley, Clifford E., . . . . .	Salem.
Wilcox, Fred E., . . . . .	Indian Orchard.
Woodaman, Lewis E., . . . . .	Worcester.

Boston, Jan. 1, 1915.

## FEDERAL AND STATE LEGISLATION.

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### AUTHORITY OF THE UNITED STATES.

H. R. 24145. APPROVED MARCH 4, 1911.

(Original Act passed June 20, 1874.)

#### AN ACT FOR THE ESTABLISHMENT OF MARINE SCHOOLS, AND FOR OTHER PURPOSES.

That the Secretary of the Navy, to promote nautical education, is hereby authorized and empowered to furnish, upon the application in writing of the governor of a State, a suitable vessel of the navy, with all her apparel, charts, books, and instruments of navigation, provided the same can be spared without detriment to the naval service, to be used for the benefit of any nautical school, or school or college having a nautical branch, established at each of the following ports of the United States: Boston, Philadelphia, New York, Seattle, San Francisco, Baltimore, Detroit, Saginaw, Michigan, Norfolk, and Corpus Christi, upon the condition that there shall be maintained at such port a school or branch of a school for the instruction of youths in navigation, steamship-marine engineering, and all matters pertaining to the proper construction, equipment, and sailing of vessels or any particular branch thereof.

SECTION 2. That a sum not exceeding the amount annually appropriated by any State or municipality for the purpose of maintaining such a marine school or schools or the nautical branch thereof is hereby authorized to be appropriated for the purpose of aiding in the maintenance and support of such school or schools: *provided, however*, that appropriations shall be made for one school in any port heretofore named in section one and that the appropriation for any one year shall not exceed twenty-five thousand dollars for any one school.

SECTION 3. That the President of the United States is hereby authorized, when in his opinion the same can be done without detriment to the public service, to detail proper officers of the navy as superintendents of or instructors in such schools: *provided*, that if any such school shall be discontinued, or the good

of the naval service shall require, such vessel shall be immediately restored to the Secretary of the Navy and the officers so detailed recalled: *and provided further*, that no person shall be sentenced to or received at such schools as a punishment or commutation of punishment for crime.

SECTION 4. That all laws and parts of laws in conflict herewith are hereby repealed.

## AUTHORITY OF THE STATE OF MASSACHUSETTS.

CHAPTER 45, REVISED LAWS, AS AMENDED BY CHAPTER 171, ACTS OF 1903, AND CHAPTER 224, ACTS OF 1913.

### THE NAUTICAL SCHOOL.

SECTION 1. There shall be a board of commissioners of the Massachusetts nautical school consisting of three citizens of the commonwealth, one of whom shall annually, before the first day of July, be appointed by the governor, with the advice and consent of the council, for a term of three years from said first day of July.

SECTION 2. Said commissioners shall serve without compensation, but they shall be reimbursed by the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 3. They shall provide and maintain a nautical school for the instruction and training of pupils in the science and practice of navigation, shall provide accommodations for the school on board a proper vessel, purchase and provide books, stationery, apparatus and supplies needed in the work of the school, appoint and remove instructors and other necessary employees, determine their number and compensation, fix the terms and conditions upon which pupils shall be received and instructed in the school and be discharged or dismissed therefrom, establish all regulations necessary for its proper management and shall from time to time provide for cruises in or from the harbor of Boston.

SECTION 4. They may receive from the United States government, and use for the accommodation of the school, such vessels as the secretary of the navy may detail.

SECTION 5. They may annually expend such sum as the general court may from year to year appropriate, which shall be paid by the commonwealth; and they shall annually submit an



estimate of the expense required in making cruises in or from the harbor of Boston, and the amount of said estimate, after approval by the governor and council and subject to the provisions of chapter six, shall be advanced to the commanding officer of the vessel detailed therefor, who shall give a bond in the sum of ten thousand dollars, with sureties approved by the governor and council, for its proper disbursement. Said advance shall not exceed ten thousand dollars for six months, and shall be accounted for by properly approved vouchers within thirty days after the termination of said cruises.

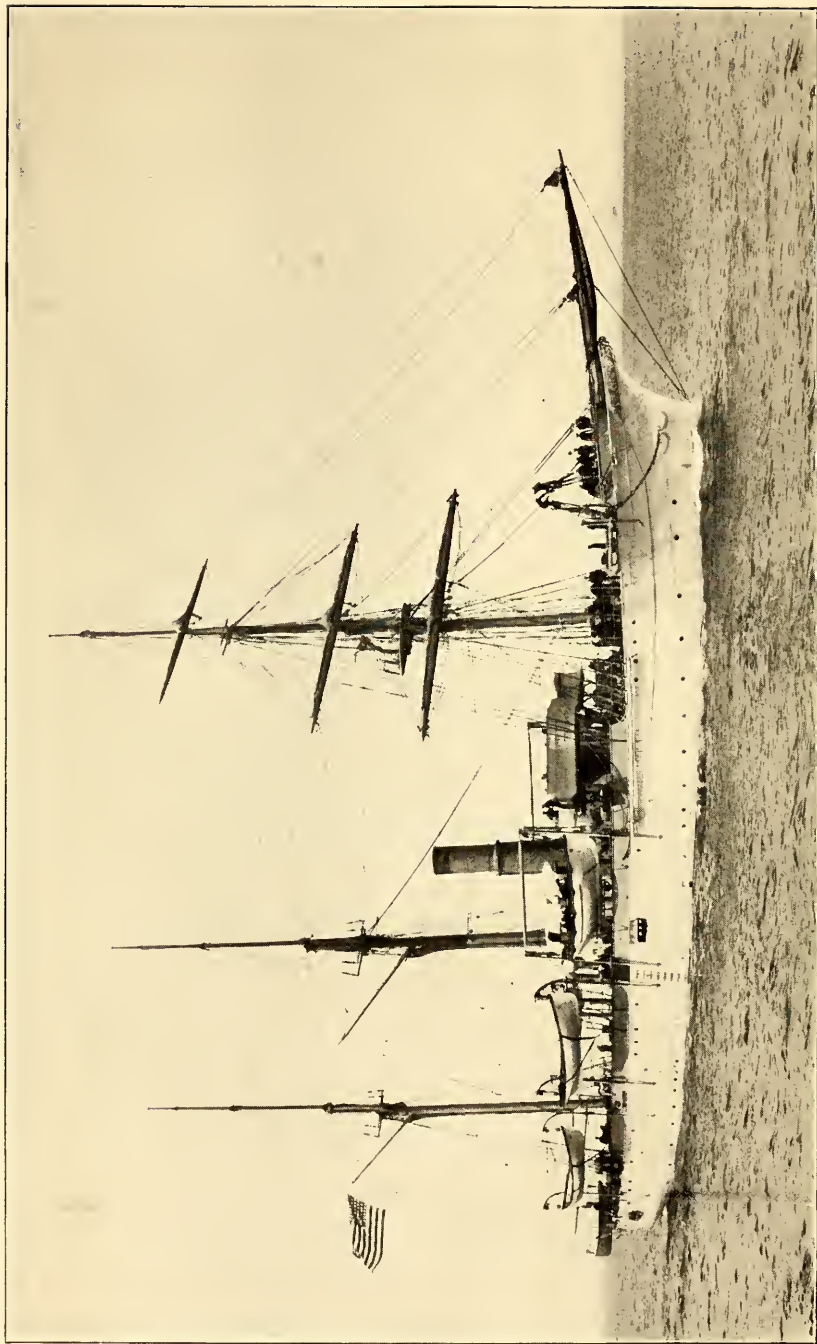
SECTION 6. They shall annually, in January, report to the general court a detailed statement of all moneys appropriated and expended during the preceding year for the nautical school, stating the results of the work during such year and making any necessary recommendations.









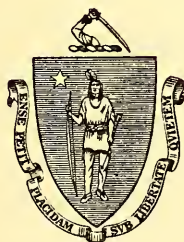


The Massachusetts Nautical Training Ship "Ranger" Leaving Boston Harbor on the Summer Cruise.

TWENTY-FOURTH ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

---

JANUARY 1, 1916



BOSTON  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS  
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1916



APPROVED BY  
THE STATE BOARD OF PUBLICATION.

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COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL  
2A PARK STREET, BOSTON

---

JOHN F. MERRY, *Chairman*

REAR ADMIRAL, U. S. N. (RETIRED)

WILLIAM E. MCKAY

CLARENCE E. PERKINS

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WILLIAM H. DIMICK, *Secretary*



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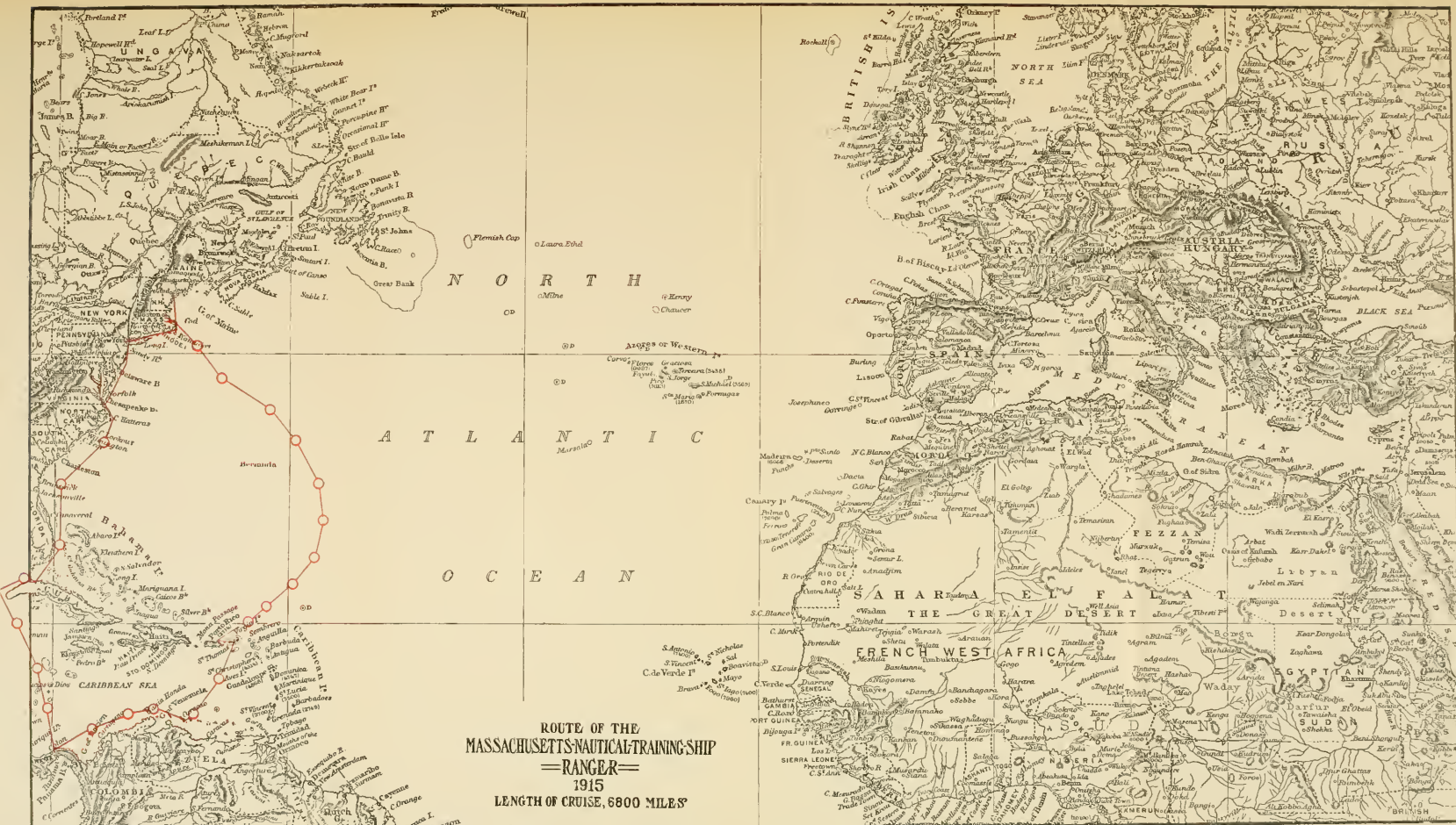
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# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The commissioners have the honor to submit their report of the operations of the school for the year 1915.

### THE WORK IN GENERAL.

The results of nautical education in Massachusetts continue to show a steady gain from year to year. Improvements have been made in the courses of study and in the equipment; the personnel of the officers and cadets is of a high standard; and there is a constantly increasing demand from marine superintendents and shipowners for graduates to fill positions as officers, both on deck and in the engine room. The demand for competent officers exceeds the supply.

The remarkable increase in American foreign tonnage, the unprecedented activity in American shipyards, and the development of the coast-to-coast trade through the Panama Canal has quickened public interest in maritime matters in general and in nautical education in particular, and it has been impossible for this school to accommodate all who desired to enter upon a seafaring career, — a condition that has existed for several years. During the year there have been 176 students enrolled in the school; they came from 77 cities and towns of the State, and their previous education was as follows: high school, 140; textile schools and private academies, 13; business colleges, 4; grammar school, 19.

The engines of the U. S. S. "Ranger" show a gain in efficiency of 10 per cent. as a result of repairs — including the

installation of a new crank-shaft — made in the engineering department. The engines, although of an old and obsolete type, are now in better condition than at any time since the ship was loaned to the State. A 10 kilowatt turbo-generator is being added to the engine room equipment, thus permitting practical instruction in the operation of a modern electrical generator.

The summer term commenced on May 6 with an enrollment of 104 cadets. After a preliminary cruise in Massachusetts Bay the annual inspection by His Excellency the Governor and Council was held on Thursday, May 20. At the conclusion of the various drills by the cadets, including sail drill, life-boat drill, fire drill and abandon ship drill, short addresses were made by Governor David I. Walsh, Hon. James A. Gallivan, Hon. Jacob Bitzer and Lieut. Howard G. Copeland, a graduate of this school.

The "Ranger" sailed from Boston for San Juan, P. R., on May 24. In planning the cruise the commissioners were forced, by the events in Europe, to make a radical departure from the usual custom of a cruise in the north Atlantic and the Mediterranean. This year, for the first time, a cruise was made to the West Indies and the Panama Canal, and this was followed by a cruise along the Atlantic coast. The cadets were afforded an opportunity to make a thorough inspection of the Panama Canal, and to visit several of the important commercial centers in the West Indies; this was of special value in view of our closer commercial relations with Porto Rico and Cuba. At San Juan many courtesies were extended to the ship's company by the Y. M. C. A. The cadets were granted the use of the Association's commodious building, and were generously entertained. The school is also greatly indebted to Mr. Arthur F. Estabrook of Boston for the cordial hospitality extended to the cadets at San Juan. At Colon all the cadets, in charge of an officer, made the passage through the Canal to the Pedro Miguel locks, as passengers on board the steamships "Charlton Hall" and "Purley." In addition, they were sent in parties in the ship's boats to the Gatun locks, four miles from the anchorage, where they had the operation of the locks and dams explained by Canal officials. A special car was provided to and

from Panama for those cadets who desired to visit that city. Every effort was made by the Canal officials to make the visit of the cadets a pleasant and profitable one, and particular thanks are due to Capt. Hugh Rodman, U. S. N., and Comdr. Douglas E. Dismukes, U. S. N. As a part of the course of instruction, each cadet was required to submit a written report on the Canal and its operation. The school is fortunate in having as superintendent a retired naval officer, as his rank and his acquaintance and experience enable him to obtain for the cadets valuable privileges in many of the ports of call during the summer cruise.

The cruise in home waters included an extended stay in Gardiner's Bay and the adjacent waters of Long Island Sound, and Narragansett Bay, — places admirably suited for the work of the school, and where the various practical exercises were carried on without interruption. Norfolk, Washington, Annapolis, New York and Jamestown were included as ports of call.

Hon. John Read, who had been a commissioner of the school since Dec. 7, 1899, died at his home in Cambridge on July 29, 1915. The following minute was adopted by the commissioners: —

The Commissioners of the Massachusetts Nautical School deeply regret the loss of a lovable friend and an efficient coworker. Of a genial, optimistic nature he was also a man of never-failing courtesy and kindness, whose sympathy went out in a practical manner to all who were in trouble or need. In public and private life he was always true to the highest ideals. During the many years he was a commissioner of the school he manifested at all times an active interest in the work, giving freely of his time and strength. His life was a splendid example of the public-spirited citizen who sacrifices for the Commonwealth with no thought of reward except that which comes from a consciousness of duty well done. His honorable record as an officer in the United States Navy during the civil war, his many years of service in the Legislature of the State, his long business experience and his calm and judicial temperament all contributed to make his service of rare value to the school.

On September 8 Mr. Clarence E. Perkins, a graduate of the school in the class of 1895, was appointed a commissioner of the school.

Comdr. Charles N. Atwater, U. S. N., who served as super-

intendent for four years, resigned on April 30; Commander Atwater's earnest and faithful work, combined with his tact and ability, ably served the school, and the commissioners accepted his resignation with great regret. Capt. P. W. Hourigan, U. S. N., was appointed to fill the vacancy. He is the author of a manual for the handling of vessels under sail, which was adopted as a textbook by the United States Naval Academy, where he served a tour of duty as instructor in seamanship; for three years he was commanding officer at the Naval Training Station at Newport, R. I., and a large part of his twenty-two years at sea was spent on board the sailing ships "Trenton," "Enterprise," "Jamestown," "Lancaster," "Alliance" and "Kearsarge."

An exhibit of the work of the school was included in the Massachusetts section at the Panama-Pacific International Exposition held at San Francisco; for this exhibit the school was awarded a gold medal.

#### THE SUMMER TERM.

The report of Capt. P. W. Hourigan, U. S. N., superintendent of the school, on the summer cruise is as follows:—

The various ports visited, with dates of departures and arrivals, are shown in the report of the navigator herewith.

The cruise, on the whole, I regard as having been very successful. The period spent in the Caribbean Sea, and especially in and in the vicinity of Colon, coming as it did in the midst of the rainy season and in midsummer, was enervating, and, except for the very great profit in the opportunity afforded to see the Panama Canal, not profitable in the general advantages offered. The failure in the cadets to show greater benefit physically from the cruise, as indicated in the report of the medical officer, was unquestionably due to this period. The latter part of the cruise in inland coast waters and coasting itself afforded an unusually good opportunity for instruction in piloting and in gaining familiarity with our own coasts, and was most valuable. In addition, it permitted a lengthy period in Gardiner's Bay and Narragansett Bay, both highly favorable for our work, and which more than compensated for the physical relaxation due to the experience of the early months of the cruise.

It is to be regretted that the opportunities for work at sea under sail alone were not greater, but the nature of the cruise operated against it. Every opportunity to carry sail was taken, however, and frequent exercises of sails and spars were held in port.



The cadets of the upper classes, both of the engineer and navigation divisions, were given every possible facility for practice in the more advanced features of their work. The opportunities presented for the navigation cadets were particularly good, and whenever possible toward the end of the cruise they were entrusted with the most responsible duties connected with the navigation of the ship. Likewise those of the junior classes were carefully instructed in the minor features.

The wireless squad did excellent work, standing a regular watch night and day at sea, and keeping in touch at all times through "listening in" with the various "high-power" stations on shore. All of these cadets successfully passed the regular government examination and received licenses.

Except as already referred to in connection with the effect of the tropical climate on the cadets, the general health was excellent.

The conduct of the cadet body has been most excellent; in foreign ports I was much gratified to receive evidence that the good conduct of the cadets on shore invariably attracted special attention and remark from the residents.

The telegram from the secretary of the Board announcing the death of Hon. John Read was received on July 30, and excited in all the deepest regret. All who came under the influence of Mr. Read's kindly spirit were deeply impressed with his personality, and deplore his loss. As a last tribute of respect to his memory, I directed that on Saturday, the day of the funeral, all but absolutely necessary work be suspended, and that the colors be displayed at half-mast.

Herewith are enclosed the reports from the heads of departments.

#### SEAMANSHIP.

During the summer the cadets of the third and fourth classes were given instruction in making bends, hitches, knotting and splicing; in the names of the parts of the ship, her tackle, gear and equipment, such as spars, sails, anchors, chains; in work aloft, bending, loosing, furling, reefing and making and taking in sail; in the marking and practical use of the lead and ship's log; in standing lookout watches; in signaling by two-arm hand semaphore; rowing and sailing in small boats; swimming; painting and practical work in preservation of ship; and many other routine duties.

The cadets of the first and second classes, in addition to the above, were given instruction in the duties and responsibilities of deck officers and petty officers, standing watches as officers of the deck, carrying out the ship's routine as quartermaster, both in port and at sea, and as boatswain's mate. They acted as coxswains of all ship's boats, obtaining valuable experience in handling boats under oars and sail. They were also given exercise at sail making, and required to act as leading men during the prosecution of work aloft, on deck and below. Each cadet was given individual practical instruction in steering by compass, marks

and ranges, and made acquainted with the orders given at the conn. They were given daily physical exercise and as much open-air work as practicable, including instruction in swimming, sailing and work on the rifle range. Cadets of the upper classes were required to become proficient in the Continental code of night signals. During the entire cruise the ship's work was accomplished by the cadets, and everything was done to familiarize them with the forms, nomenclature and customs of the sea.

#### NAVIGATION.

While at sea the cadets of the first and second classes were required to pass in noon position by observation and dead reckoning, course and distance made good since preceding noon, set and drift of current, and the deviation of the compass by observation. Sights were taken and worked independently. The progress in this part of the work was satisfactory, considering the time at sea out of sight of land.

Chronometer comparisons, general care and winding of chronometers were emphasized. The radio was at all times open to cadets for receiving time signals. We were never out of range of either the Arlington or Key West radio stations.

During the preliminary cruise, and again in Gardiner's Bay, the ship was swung for deviations, giving the cadets an opportunity to observe and participate in this important problem of modern navigation.

While coasting the various problems of piloting were put into practical operation, and opportunity was given each cadet to perfect himself in taking and plotting cross bearings, bow and beam bearings, use of charts, sailing directions, tide tables, etc.

The sounding machine and coasting lead were used frequently for practice, as well as for actual use.

The submarine signal apparatus was put to its first practical test since its installation, in making Pollock Rip Shue Light vessel in a fog on September 15.

The cadets of the third and fourth classes had ample opportunity to observe the various instruments used in navigation and to become acquainted with their use, which will be of great value to them in their theoretical work during the winter term.

#### ITINERARY OF THE CRUISE OF 1915.

May 8, Boston to Provincetown; May 15, Provincetown to Gloucester; May 18, Gloucester to Boston; May 20, Governor's inspection; May 24, sailed on cruise.

PORTS.	Distance (Miles).	Left.	Arrived.	Days at Sea.	Days in Port.
Boston-San Juan, . . . . .	1,917	May 24	June 4	11	—
San Juan-St. Thomas, . . . . .	75	June 10	June 10	1	6
St. Thomas-Curacao, . . . . .	452	June 16	June 18	2	6
Curacao-Colon, . . . . .	709	June 22	June 26	4	4
Colon-Havana, . . . . .	1,000	July 6	July 11	5	10
Havana-Norfolk, . . . . .	990	July 16	July 20	4	5
Norfolk-Newport News, . . . . .	12	July 23	July 23	—	3
Newport News-Old Point Comfort, . . . . .	8	July 24	July 24	—	1
Old Point Comfort-Washington, . . . . .	160	July 26	July 27	1	2
Washington-Annapolis, . . . . .	160	Aug. 3	Aug. 4	1	7
Annapolis-New York, . . . . .	387	Aug. 5	Aug. 7	2	1
New York-Gardiner's Bay, . . . . .	105	Aug. 14	Aug. 14	1	7
Gardiner's Bay-New London, . . . . .	20	Aug. 20	Aug. 20	—	6
New London and vicinity, . . . . .	105	Aug. 24	Aug. 26	1	4
New London-Jamestown, . . . . .	45	Aug. 27	Aug. 27	—	1
Jamestown-Boothbay, . . . . .	220	Sept. 4	Sept. 6	1	8
Boothbay-Portland, . . . . .	33	Sept. 11	Sept. 11	—	5
Portland-Nantucket, . . . . .	150	Sept. 14	Sept. 15	1	3
Nantucket-Edgartown, . . . . .	23	Sept. 18	Sept. 18	—	3
Edgartown-Vineyard Haven, . . . . .	8	Sept. 21	Sept. 21	—	3
Vineyard Haven-Jamestown, . . . . .	45	Sept. 23	Sept. 23	—	2
Jamestown-Gloucester, . . . . .	151	Sept. 25	Sept. 26	1	2
Gloucester-Boston, . . . . .	25	Sept. 30	Sept. 30	—	4
	6,800			36	93

## MARINE ENGINEERING.

Senior cadets were instructed in the following: firing, oiling, operation of main and auxiliary machinery, overhaul and repairs to same, in port and at sea; finding dead center of engines, and valve setting for main and variable expansion valves; pipe systems; log writing; coal consumption, and keeping check on coal as received on board; inspection, care and preservation of boilers, testing water in same for salt and acidity; taking indicator diagrams and reading same for defective valve setting; finding mean pressure from diagrams by ordinates and planimeter; working out horse power of engines by simple rules and logarithms; care and caution necessary in using steam and in starting, operating and stopping engines; care and preservation of hull and fittings.

Junior cadets were instructed in coal passing, firing, names and uses of firing tools and of boiler fittings.



COAL REPORT.										Tons.
Coal on hand at beginning and received during cruise,	.	.	.	.	.	.	.	.	.	677.6
Expended,	.	.	.	.	.	.	.	.	.	633.3
										<hr/>
Remaining on hand,	.	.	.	.	.	.	.	.	.	44.3
Expended as follows: —										
Galley,	.	.	.	.	.	.	.	.	.	17.0
Distilling,	.	.	.	.	.	.	.	.	.	49.9
Dynamo and other auxiliaries,	.	.	.	.	.	.	.	.	.	195.4
Moving ship,	.	.	.	.	.	.	.	.	.	371.0
										<hr/>
Totals,	.	.	.	.	.	.	.	.	.	633.3

#### ELECTRICAL WORK.

First and second classes nautical cadets were given instruction and practice in the use of the Continental Morse Code for night signaling, each cadet being required to know the code and be able to send and receive.

First and second classes engineer cadets were given instruction and practice in the repairs and care of the ship's electrical plant. Under the supervision of the electrician each cadet was assigned full charge of the ship's electrical apparatus, being required to tend the starting, shifting load, and stopping dynamos, and to make any necessary repairs to dynamos, motors, lights, call bell and batteries.

Cadets of the first-year classes, who were selected for radio instruction during the winter term, passed the government examination and received radio licenses. They were assigned regular radio watch at sea, and assisted in the thorough overhauling and rearranging of the radio set; also in taking down and repairing the radio antenna at sea.

#### MEDICAL DEPARTMENT.

All cadets who had not been successfully vaccinated last year were vaccinated against smallpox, and in no instance was there any untoward result. The antityphoid inoculation is optional, and only nineteen new cadets availed themselves of this opportunity. Because of the great efficiency of this, as shown by various army and navy reports, it seems advisable for us to adopt this as a routine measure.

The result of the heat experienced in the tropics is seen in the measurements of the cadets. Heretofore the gain has been marked, but the records of this summer show an average gain in weight of less than a pound, whereas the average chest expansion shows a loss.

#### THE WINTER TERM.

The following is the study schedule for the winter term of 1915-16: —

*Winter Schedule.*

		First Class, Seamanship.	Second Class, Seamanship.	First Class, Engineers.	Second Class, Engineers.	Third Class, First Section.	Third Class, Second Section.	Fourth Class, First Section.	Fourth Class, Second Section.
Monday	{ 9-10, 10-11, 11-12, 12-12.40, }	Mathematics. Study. Navigation, Study.	Study. Mathematics. Study. Navigation.	Steam. Study. Mathematics. Study.	Study. Steam. Study. Mathematics.	Navigation. Study. Seamanship. Study.	Study. Navigation. Study. Seamanship.	Seamanship. Study. Steam. English.	Study. Seamanship. English. Steam.
Tuesday	{ 9-10, 10-11, 11-12, 12-12.40, }	Navigation. Study. English. Study.	Study. Navigation. Study. English.	Steam. Study. Electricity. Study.	Study. Steam. Study. Electricity.	Electricity. Study. Steam. Study.	Study. Electricity. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Wednesday	{ 9-10, 10-11, 11-12, 12-12.40, }	Seamanship. Study. Navigation. Study.	Study. Seamanship. Study. Navigation.	English. Study. Electricity. Study.	Study. English. Study. Electricity.	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.
Thursday	{ 9-10, 10-11, 11-12, 12-12.40, }	Navigation Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.	Seamanship. English. Steam. Study.	English. Seamanship. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Friday	{ 9-10, 10-11, 11-12, 12-12.40, }	Seamanship. Study. English. Study.	Study. Seamanship. Study. English.	Mathematics. Study. Steam. Study.	Study. Mathematics. Study. Steam.	English. Study. Mathematics. Study.	Study. English. Study. Mathematics.	Electricity. Study. Seamanship. Study.	Study. Electricity. Study. Seamanship.

The above table indicates in only a general way the actual studies pursued by each class. Cadets are divided for instruction into sections, with one set of sections made up of cadets of the first and second classes combined, and the other set of the third and fourth classes combined.

Persons interested in the work of the school are cordially invited to visit the "Ranger" on any day except Saturday and Sunday, when the cadets are absent on home leave.

The following are the officers and instructors now connected with the school:—

Superintendent and commanding officer, Capt. P. W. Hourigan, U. S. N.  
Executive officer, Lieut. Alfred H. Miles, U. S. N.  
Navigator, A. Russell Cushing (graduate M. N. S.).  
Watch officer, Chief Boatswain Albert Seeckts, U. S. N.  
Watch officer, Albert L. Ware (graduate M. N. S.).  
Chief engineer, Machinist John O'Neill, U. S. N.  
Medical officer, Gardner N. Cobb, M.D.  
Paymaster and captain's clerk, Theodore C. Howe, U. S. N.  
Electrician, Charles A. Scott.

#### PERSONNEL.

April 26, 1915, Capt. P. W. Hourigan, U. S. N., retired, appointed superintendent.

April 30, 1915, Comdr. Charles N. Atwater, U. S. N., retired, superintendent, resigned.

July 29, 1915, Commissioner John Read of Cambridge died.

Sept. 8, 1915, Clarence E. Perkins of Winthrop appointed commissioner.

#### REGISTER OF GRADUATES.

The following list includes some of the graduates who are following the sea; many names have been omitted on account of lack of space, and there are others of whom the commissioners have no record:—

Graduated.	NAME.	Residence.	Position.	Vessel.
1902	Osborne E. McKay, .	Provincetown, .	Pilot, . . .	Panama Canal.
1902	Arthur T. Luther, . .	Swansea, . .	Pilot, . . .	Panama Canal.
1894	Henry G. Carpenter, <sup>1</sup> .	Roxbury, . .	Captain, . .	"Frances Alice."
1894	James E. Reardon, <sup>1</sup> .	Roxbury, . .	Captain, . .	"Santurce" (1,836 tons).
1895	George E. Eaton, . .	Wakefield, . .	Captain, . .	"Anemone."
1896	Henry R. Bodge, . .	Wollaston, . .	Captain, . .	"Northland" (3,282 tons).
1896	Wm. N. P. Baker, . .	Dorchester, . .	Captain, . .	"Corozal" (3,063 tons).
1896	George R. Lauriat, . .	Medford, . .	Captain, . .	"Pickering."
1897	Fred'k A. Sparks, . .	Provincetown, .	Captain, . .	"Machigonne."
1897	Willis Howes, . . .	South Yarmouth, .	Captain, . .	"El Agulea."
1897	Emery Rice, . . .	Brighton, . .	Captain, . .	"Mongolia" (13,658 tons).
1898	Louis E. Congdon, . .	Boston, . .	Captain, . .	"Colorado."
1898	Carl E. A. Anderson, .	Roslindale, . .	Captain, . .	"Honolulu" (7,059 tons).
1899	Richard T. Blackford, .	Marblehead, .	Captain, . .	"Jessie Costa."
1900	William B. Knight, . .	Hull, . . .	Captain, . .	"Pavlof."
1900	James S. Howes, . . .	Woods Hole, .	Captain, . .	"Persian."
1901	Theodore H. Bicknell, .	Melrose, . .	Captain, . .	"Herman Frasch" (3,803 tons).
1902	Herman T. Parker, . .	Rockport, . .	Captain, . .	"Lexington" (2,092 tons).
1902	Fred C. Seibert, . . .	Greenfield, . .	Captain, . .	"Solace" (5,700 tons).
1903	Nicholas J. Kane, . .	Whitman, . .	Captain, . .	"Panaman" (6,649 tons).
1904	John F. Williamson, .	Brockton, . .	Captain, . .	"Myrtle."
1908	Eugene P. Shevlin, . .	East Boston, .	Captain, . .	"Gardenia."
1908	Edw. S. Ells, Jr., . .	Cambridge, . .	Captain, . .	"Vulcan" (11,200 tons).
1895	Walter J. Healey, . .	Worcester, . .	First officer, .	"Zulia."
1895	Geo. L. P. Covell, . .	Roxbury, . .	First officer, .	Inter-Island Steamship Company.
1897	Chas. W. Clift, . . .	Whitman, . .	First officer, .	"Gen. E. O. C. Ord."
1898	Eldon G. Freeman, . .	Whitman, . .	First officer, .	"Sequoia."
1899	Walter S. Lynch, . .	Chelsea, . .	First officer, .	"Kroonland."
1899	Edward G. Smith, . .	Boston, . .	First officer, .	"Minnesotan."
1900	Alfred M. Cummings, .	Worcester, . .	First officer, .	"Edith" (5,100 tons).
1900	E. Newton Parker, . .	Greenfield, . .	First officer, .	"Nero."
1901	Robert W. Tucker, . .	Kendal Green, .	First officer, .	"Kansan."
1901	Chas. D. Harrington, .	Cambridge, . .	First officer, .	"Mascotte."
1902	William I. O'Reilly, .	South Boston, .	First officer, .	"Queen."
1902	Arthur Jensen, . . .	Provincetown, .	First officer, .	"Nanshan."
1902	Edwin J. Madden, . .	Everett, . .	First officer, .	"St. Louis."
1903	Harry M. Bostwick, .	Northbridge, .	First officer, .	"Ajax."
1903	Harold C. Rideout, . .	Concord, . .	First officer, .	"Comus."

<sup>1</sup> Transferred.

Graduated.	NAME.	Residence.	Position.	Vessel.
1903	Robert B. Powers, . .	Brockton, . .	First officer, . .	"Nereus."
1904	Edward C. Roberts, . .	North Beverly, . .	First officer, . .	"Cristobal."
1905	Fred'k S. Walker, . .	Dorchester, . .	First officer, . .	"Malden."
1905	James A. Crocker, . .	Nahant, . .	First officer, . .	"Tuscan."
1905	Harry W. Maynard, . .	Winthrop, . .	First officer, . .	"Sumac."
1906	William H. Lee, . .	Roxbury, . .	First officer, . .	"Kanawha."
1907	Harry L. Chick, . .	Beverly, . .	First officer, . .	"Justin."
1909	Carroll E. Higgins, . .	Somerville, . .	First officer, . .	American-Hawaiian Line.
1910	Chester R. Morris, . .	Springfield, . .	First officer, . .	"Myrtle."
1912	Robert M. Gray, . .	Melrose, . .	First officer, . .	"Peter H. Crowell."
1894	Albert L. Warner, <sup>1</sup> . .	Wollaston, . .	Second officer, . .	"Geo. E. Hawley."
1897	Edwin F. Darling, . .	West Dennis, . .	Second officer, . .	"Dorothy Brad- ford."
1898	Charles H. Kilmer, . .	Somerville, . .	Second officer, . .	"Leonidas."
1900	Joseph E. Gately, . .	Marlborough, . .	Second officer, . .	"Princess Ann."
1901	John J. Coholan, . .	South Boston, . .	Second officer, . .	"Malden."
1902	Wm. M. Chisholm, . .	North Attle- borough.	Second officer, . .	-
1903	Mark Woodbury, . .	Townsend, . .	Second officer, . .	"Iowan."
1903	Benj. Connell, . .	Peabody, . .	Second officer, . .	"Philadelphia."
1904	Leslie F. Holmes, . .	East Whitman, . .	Second officer, . .	"Antilles."
1906	Geo. C. Bosson, . .	Reading, . .	Second officer, . .	"Boswell."
1907	Walter L. Smith, . .	Ashburnham, . .	Second officer, . .	"Oregonian."
1907	William M. Gifford, . .	Woods Hole, . .	Second officer, . .	"Nereus."
1908	Ernest F. Robinson, . .	East Boston, . .	Second officer, . .	"Cyclops."
1909	William A. Sillars, . .	Danvers, . .	Second officer, . .	"Malden."
1909	Robert S. Sparrow, . .	Eastham, . .	Second officer, . .	-
1909	Harold C. Cooper, . .	Worcester, . .	Second officer, . .	Standard Oil Com- pany.
1910	Franklin K. Tyler, . .	Beachmont, . .	Second officer, . .	"Cushing."
1911	Frazier L. Sears, . .	East Dennis, . .	Second officer, . .	Standard Oil Com- pany.
1911	Eugene W. Miller, . .	East Saugus, . .	Second officer, . .	"Minnesota."
1911	William M. Gorham, . .	Winthrop, . .	Second officer, . .	"Muskogee."
1911	Chas. F. Fornason, . .	Gloucester, . .	Second officer, . .	"Ultonia" (10,000 tons).
1911	Harold S. Dexter, . .	Mattapoisett, . .	Second officer, . .	"Caesar."
1912	Ellenwood Folger, . .	Siasconset, . .	Second officer, . .	"Santiago."
1912	Ralph E. Merithew, . .	Haverhill, . .	Second officer, . .	"Massapequa."
1912	John W. Thompson, . .	Marion, . .	Second officer, . .	"Anemone."
1913	Arthur G. Burt, . .	Whitman, . .	Second officer, . .	"Geo. E. Warren."
1913	James A. MacCabe, . .	Osterville, . .	Second officer, . .	-
1904	Andrew J. Iverson, . .	Beverly, . .	Third officer, . .	"San Juan."
1906	William A. Manchester, . .	Campello, . .	Third officer, . .	"Nanshan."

<sup>1</sup> Transferred.



Graduated.	NAME.	Residence.	Position.	Vessel.
1909	Eric E. Winquist, . .	Jamaica Plain,	Third officer, .	"Kanawha."
1911	Henry O. K. Hanson, .	Neponset, .	Third officer, .	-
1911	Fred'k J. Shaw, . .	Cambridge, .	Third officer, .	"Cyclops."
1911	Raymond C. Vose, . .	Cambridge, .	Third officer, .	"Nereus."
1911	Chas. C. Plummer, . .	Cambridge, .	Third officer, .	"Orion."
1911	Wesley F. Besse, . .	South Hanson,	Third officer, .	"Robert Dollar."
1912	Wm. H. O'Donoghue, .	Roxbury, .	Third officer, .	"Arethusa."
1912	Clarence L. Howard, .	Auburndale, .	Third officer, .	-
1912	Alex. G. Perkins, . .	Newburyport, .	Third officer, .	"Achilles."
1912	Edw. A. Moore, Jr., .	Forest Hills, .	Third officer, .	"Solace."
1912	Jos. M. Daniel, . .	Osterville, .	Third officer, .	"Kentuckian."
1912	Harold Ertel, . . .	Longmeadow, .	Third officer, .	"Carolyn."
1913	Waldon A. McIntire, .	Gloucester, .	Third officer, .	Clyde Line.
1913	Philip H. Waldron, . .	Westborough, .	Third officer, .	"L. V. Stoddard."
1913	Wilfred Senior, . . .	Boston, . .	Third officer, .	"Nebraskan."
1913	Borden A. Tuell, . . .	New Bedford, .	Third officer, .	"City of Atlanta."
1913	Nelson T. Nutter, . .	Newburyport, .	Third officer, .	"Vulcan."
1913	Everett O. Swinson, .	East Gloucester,	Third officer, .	"Alliance."
1907	Elmer B. Small, . . .	North Truro, .	Fourth officer, .	"Sierra" (6,000 tons).
1902	A. Russell Cushing, .	Dorchester, .	Navigating officer,	"Ranger."
1911	Albert L. Ware, . . .	Cambridge, .	Watch officer, .	"Ranger."
1898	Joseph E. Sheedy, . .	Reading, . .	General superintendent,	Inter-Island Navigation Company.
1906	Howard G. Copeland, .	Malden, . .	Superintendent, .	Massachusetts Naval Cadet School.
1906	Ernest J. Flanigan, . .	Wakefield, .	Instructor, . .	Massachusetts Naval Cadet School.
1912	Norman E. Merrill, . .	Walpole, . .	Instructor, . .	Massachusetts Naval Cadet School.
1898	George F. Waite, . . .	Winthrop, .	Chief inspector of steamboats.	Providence, R. I.
1896	Alvin W. Haynes, . . .	Somerville, .	Assistant inspector of hulls.	Boston, Mass.
1899	Frank B. Davis, . . .	Dorchester, .	Assistant inspector of boilers.	New Orleans, La.
1898	Clarence E. Wood, . .	Fall River, .	Lieutenant, .	U. S. Navy.
1907	Thomas Baxter, . . .	South Dennis, .	Lieutenant, .	U. S. Navy.
1895	Philip W. Lauriat, . .	Medford, . .	1st Lieut., U. S. C. G. S.	"Algonquin."
1899	James A. Alger, . . .	Reading, . .	1st Lieut., U. S. C. G. S.	"McCulloch."
1900	John F. McGourty, . .	Worcester, .	2d Lieut., U. S. C. G. S.	"Miami."
1906	William F. Towle, . . .	Boston, . .	2d Lieut., U. S. C. G. S.	Coast Guard Academy.
1896	Charles S. Young, . . .	Boston, . .	Nautical expert, .	Navy Department.
1897	Fred'k W. Jones, . . .	Winchester, .	Nautical expert, .	Navy Department.
1900	Gershon Bradford, . .	Duxbury, . .	Nautical expert, .	Navy Department.
1903	Leander A. Clapp, . .	Brockton, . .	1st Lieutenant, .	U. S. Marine Corps.
1906	Clarence E. Nutting, .	Cambridge, .	1st Lieutenant, .	U. S. Marine Corps.

Graduated.	NAME.	Residence.	Position.	Vessel.
1894	Horace W. Folger, <sup>1</sup>	Wilmington,	Pilot,	Boston Pilot Boat Service.
1900	I. Clarence Bailey,	Kingston,	Pilot,	Boston Pilot Boat Service.
1912	Herbert A. Burns,	New Bedford,	Cadet officer,	"Sunflower."
1895	Geo. A. Faulkner,	Roxbury,	Keeper,	Cape Cod Light.
1896	Jas. H. B. Meehan,	Lowell,	Chief engineer,	"Proteus" (19,000 tons).
1896	Christopher W. Sorenson,	Somerville,	Chief engineer,	"Nassau."
1897	Augustus T. Holmes,	Ipswich,	Chief engineer,	"J. M. Guffey" (2,520 tons).
1898	Charles E. Rowe,	Lynn,	Chief engineer,	"A j a x" (9,250 tons).
1898	John C. Ganser,	Jamaica Plain,	Chief engineer,	"Caribbean" (2,800 tons).
1898	Everett S. Ransom,	Mattapoisett,	Chief engineer,	"Parthenia."
1898	William E. Ballsdom,	Neponset,	Chief engineer,	"Herman Winter."
1898	Wilbur S. Lamont,	Leominster,	Chief engineer,	Panama Canal.
1899	Forrest D. Clark,	Dorchester,	Chief engineer,	"Harvard" (3,737 tons).
1900	Hollis M. Cornwall,	Melrose,	Chief engineer,	"Persian" (2,677 tons).
1900	William Glover,	Wilmington,	Chief engineer,	"J. H. Devereaux" (1,618 tons).
1900	Norris R. Sibley,	Worcester,	Chief engineer,	"Col. Wikoff."
1900	Charles E. Lowe,	Roxbury,	Chief engineer,	"Mackinaw" (2,578 tons).
1900	Elmer P. Butterworth,	Foxborough,	Chief engineer,	"Gulflight."
1901	Robert A. Patterson,	Brighton,	Chief engineer,	"Solace" (5,700 tons).
1901	David W. Warren,	Everett,	Chief engineer,	"Everett" (3,238 tons).
1901	Eugene I. K. Murphy,	Worcester,	Chief engineer,	Government vessel, Panama Canal.
1902	Daniel F. Butler,	North Easton,	Chief engineer,	"Gloria."
1904	Cecil L. McIntyre,	Upton,	Chief engineer,	-
1905	Walter C. Lockhart,	Wakefield,	Chief engineer,	-
1895	Michael D. Sullivan,	Boston,	First engineer,	"Enterprise."
1896	Forrest H. McIntyre,	Gloucester,	First engineer,	"Daniel Millard."
1898	Frank P. Killion,	Malden,	First engineer,	"Kanai."
1900	J. J. Donohue,	Cambridge,	First engineer,	"Oregon."
1900	James F. Rawdon,	Worcester,	First engineer,	"Tuscan."
1901	Frank A. Browne,	Westborough,	First engineer,	Isthmian Canal Commission.
1903	Edward A. Mercer,	Cambridge,	First engineer,	"Mars."
1903	James S. McGarry,	Shrewsbury,	First engineer,	"Creole."
1904	Charles W. Bumpus,	Wakefield,	First engineer,	"Cape Ann."
1904	Edw. J. Chadbourne,	Reading,	First engineer,	"Henry F. Dimock."
1905	Fred G. Carlton,	Maynard,	First engineer,	"Onondaga."
1905	Charles F. Tarr,	Taunton,	First engineer,	"Cyclops."
1906	Augustus C. Caldwell,	Dorchester,	First engineer,	"Ajax."
1906	Bradford N. A. Gladding,	New Bedford,	First engineer,	"Brutus."
1907	Fred'k M. Coughlin,	North Dartmouth,	First engineer,	Army tug, Newport.

<sup>1</sup> Transferred.



Graduated.	NAME.	Residence.	Position.	Vessel.
1907	George H. Stickney, .	Worcester, .	First engineer, .	"Nanshan."
1907	Archie E. Bragg, . .	New Bedford, .	First engineer, .	"Saturn."
1908	Thos. B. Pellett, . .	Worcester, .	First engineer, .	"Orion."
1895	Fred'k H. Stackpole, .	Hyde Park, .	Second engineer, .	"City of Brockton."
1896	John O. Sargent, . .	Worcester, .	Second engineer, .	"St. Louis."
1897	Perley W. Kimpton, .	Somerville, .	Second engineer, .	"Shawmut."
1898	Arthur P. Stevens, . .	Nantucket, .	Second engineer, .	"Ponce."
1900	Ressie E. Bowser, . .	North Abington. ton.	Second engineer, .	"Nero."
1900	Earle P. Marshall, . .	North Easton, .	Second engineer, .	"Uruguay."
1901	Sydney A. Maglathlin, .	West Bridge- water.	Second engineer, .	"Arethusa."
1902	Augustus W. Hart, . .	North Truro, .	Second engineer, .	"Chippewa."
1902	Ernest L. Saunders, .	Brockton, .	Second engineer, .	"Justin."
1905	Thomas W. Chisholm, .	North Billerica,	Second engineer, .	-
1906	Victor M. Foster, . .	East Boston, .	Second engineer, .	"Newton."
1906	Arthur A. Burbank, .	Carver, . .	Second engineer, .	"Hector."
1907	Philip B. Marcy, . .	Boston, . .	Second engineer, .	"Oklahoma."
1907	Jos. R. Wier, . . .	Saundersville, .	Second engineer, .	"Nero."
1909	Everett B. Ward, . .	Lynn, . .	Second engineer,	"Saturn."
1909	William E. Caddigan, .	Dorchester, .	Second engineer, .	"Lewis K. Thur- low."
1909	Samuel J. Miller, . .	Fall River, .	Second engineer, .	"Brutus,"
1909	Ervin J. Kelley, . .	Medford, . .	Second engineer, .	"Anemone."
1910	Leslie S. Badger, . .	Dorchester, .	Second engineer, .	"Seaconnet."
1910	Geo. W. Sibley, . .	Worcester, .	Second engineer, .	"Grecian."
1911	Robt. F. Phinney, . .	Roslindale, .	Second engineer, .	"Cushing."
1911	Samuel D. White, . .	Hyannisport, .	Second engineer, .	"Penobscot."
1912	Louis H. Racicot, . .	Lowell, . .	Second engineer, .	"Jason."
1912	Wm. A. Hamilton, . .	Cliftondale, .	Second engineer, .	"Cyclops."
1914	Leslie T. Severence, .	Cambridge, .	Second assistant engineer.	-
1903	Rudolph Komenda, . .	Somerville, .	Third engineer, .	"Hannibal."
1908	Arthur E. Whiton, . .	Wakefield, .	Third engineer, .	"Justin."
1908	George H. Cameron, .	Wakefield, .	Third engineer, .	"Orion."
1909	Fritz T. Kebler, . .	Rochdale, .	Third engineer, .	"Onondaga."
1910	Ernest B. Wyatt, . .	Wakefield, .	Third engineer, .	"Vulcan."
1911	Geo. L. Lockhart, . .	Wakefield, .	Third engineer, .	"Jason."
1912	Albert W. Culley, . .	Fitchburg, .	Third engineer, .	"Vulcan."
1912	Walter L. Brewster, .	Somerville, .	Third engineer, .	"F. J. Lisman."
1912	Richard K. O'Connell, .	North Easton, .	Third engineer, .	"Everett."
1913	Earle A. Lewis, . .	Woods Hole, .	Third engineer, .	-
1913	Russell A. McLay, . .	Lawrence, .	Third engineer, .	-

Graduated.	NAME.	Residence.	Position.	Vessel.
1912	George R. Davison,	Springfield,	Third assistant engineer.	"Advance."
1897	Lorenzo C. Farwell,	Dorchester,	1st Lieut., Eng., U. S. C. G. S.	"Gresham."
1896	Webb C. Maglathlin,	Bridgewater,	2d Lieut., Eng., U. S. C. G. S.	"Arcata."
1897	Albert F. Patterson,	Townsend,	2d Lieut., Eng., U. S. C. G. S.	"Alert."
1898	John T. Carr,	Malden,	2d Lieut., Eng., U. S. C. G. S.	"Penrose."
1906	Henry C. Roach,	New Bedford,	2d Lieut., Eng., U. S. C. G. S.	"Yamacraw."
1907	Paul R. Smith,	Concord,	3d Lieut., Eng., U. S. C. G. S.	"Algonquin."
1895	Charles H. Lincoln,	Gloucester,	Marine surveyor,	Cleveland, Ohio.
1898	Herbert E. Fish,	Mattapoisett,	Chief machinist,	U. S. Navy.
1896	H. E. Kershaw,	Lawrence,	Machinist,	U. S. Navy.
1903	C. Allan Holbrook,	Marlborough,	Machinist,	"Oregon."
1900	Hugh H. McDonagh,	Worcester,	Electrician,	"Cæsar."
1902	John F. Murphy,	Worcester,	Electrician,	"Viper."
1903	Fred S. Garland,	Randolph,	Electrician,	"Alabama."
1903	Guy H. Hudson,	Somerville,	Electrician,	"Alabama."
1904	Charles A. Hill,	Melrose,	Electrician,	"Bay State."
1904	C. George Dyson,	Billerica,	Electrician,	"Delaware."
1905	Lawrence G. Kelley,	Taunton,	Electrician,	"Illinois."
1905	John F. Kinnaly,	South Boston,	Electrician,	"Vermont."
1906	Carroll L. Morgan,	Beverly,	Navy wireless electrician.	San Juan, P. R.
1906	Louis H. Houghton,	Worcester,	Electrician,	"Missouri."
1906	William R. Dolan,	Worcester,	Chief electrician,	Navy Yard, Charles-town.
1907	Eugene E. Chaney,	Arlington,	Electrician,	"North Dakota."
1907	Louis L. LaMontagne,	Millers Falls,	Electrician,	"Pilgrim."
1910	Howell S. Loundes,	Worcester,	Electrician,	"Georgia."
1911	Harvey M. Thorndike,	Swampscott,	Electrician,	"Nereus."
1911	Patrick S. Coakley,	Malden,	Electrician,	Submarine "C-2."
1911	Walter P. Lynn,	Beverly,	Electrician,	"Birmingham."

## CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1915, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Withdrawn, dismissed, dropped.	Number connected with the School.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.		
1893,	138	-	138	-	-	-	29	-	29	24	138
1894,	42	21	63	-	-	-	26	17	43	18	156
1895,	33	38	71	19	19	38	6	6	12	6	156
1896,	35	39	74	20	17	37	16	15	31	17	174
1897,	32	41	73	20	21	41	10	10	20	9	165
1898,	42	57	99	15	25	40	12	14	26	23	184
1899,	34	45	79	11	12	23	24	17	41	11	184
1900,	28	50	78	14	36	50	9	12	21	14	186
1901,	34	37	71	11	18	29	8	12	20	16	172
1902,	32	58	90	16	22	38	16	18	34	13	197
1903,	34	32	66	17	14	31	10	15	25	17	178
1904, <sup>1</sup>	-	-	60	16	29	45	5	12	17	31	165
1905, <sup>1</sup>	-	-	65	10	10	20	-	-	9	13	137
1906, <sup>1</sup>	-	-	50	16	19	35	-	-	18	19	145
1907, <sup>1</sup>	-	-	60	10	15	25	-	-	17	26	133
1908, <sup>1</sup>	-	-	45	8	9	17	-	-	9	9	110
1909, <sup>1</sup>	-	-	81	14	22	36	-	-	7	16	156
1910, <sup>1</sup>	-	-	54	6	15	21	-	-	16	15	181
1911, <sup>1</sup>	-	-	69	20	23	43	-	-	7	18	168
1912, <sup>1</sup>	-	-	57	17	16	33	-	-	14	15	157
1913, <sup>1</sup>	-	-	79	21	19	40	-	-	20	8	174
1914, <sup>1</sup>	-	-	65	20	16	36	-	-	22	7	171
1915, <sup>1</sup>	-	-	70	26	19	45	-	-	18	11	176
	-	-	1,657	327	396	723	-	-	476	356	-

<sup>1</sup> Beginning in 1904, the cadets upon entrance are unclassified until their second year.

## MEMBERSHIP OF THE SCHOOL.

*Graduating Class, March, 1915.*

Benhard, Leo A., . . . . .	Boston.
Bonner, William J., . . . . .	East Boston.
Burns, Laurence E., . . . . .	Winthrop.
Ciolkosz, Stanislaus P. J., . . . . .	Taunton.
Damon, Russell C., . . . . .	Quincy.
Davenport, William C., . . . . .	New Bedford.
Fales, Curtis C., . . . . .	Westborough.
Gerecke, Bernhardt, . . . . .	Boston.
Hartwell, Roy C., . . . . .	Boston.
Herron, Wilfred C., . . . . .	Lawrence.
Holmes, John, . . . . .	Campello.
Horan, George T., . . . . .	Nantucket.
Hovgaard, Arthur A., . . . . .	Brookline.
Hurley, Charles H., Jr., . . . . .	Westminster.
Jacobson, Charles P., . . . . .	Everett.
Moore, Ralph S., . . . . .	Newton.
Rhodes, Edward R., . . . . .	Lowell.
Stevens, Clarence E., Jr., . . . . .	West Barnstable.
Stewart, Roy, . . . . .	Everett.
Winquist, Arvid H., . . . . .	Jamaica Plain.

*Graduating Class, October, 1915.*

Bamforth, Charles N., . . . . .	Concord.
Barrett, Sherman J., . . . . .	Lawrence.
Comeau, Martin F., . . . . .	Belmont.
Craven, Harold, . . . . .	Lawrence.
Delano, David P., . . . . .	Orleans.
Durney, Philip J., . . . . .	Gloucester.
Flagg, Osgood R., . . . . .	Southborough.
Ford, Ronald B., . . . . .	Lawrence.
Gaughen, John J., . . . . .	South Boston.
Griffith, Charles E., . . . . .	North Cambridge.
Hammond, Earle D., . . . . .	East Mattapoisett.
Higgins, Arthur F., . . . . .	Lawrence.
Houston, John F., Jr., . . . . .	Jamaica Plain.
Jones, Albert V., . . . . .	Fall River.
Konrad, Leif H., . . . . .	Mattapan.
Linehan, Mark E., . . . . .	North Easton.
Marshall, Leland M., . . . . .	Revere.
Mayo, Herman S., . . . . .	Provincetown.
Nichols, Sidney F., . . . . .	Worcester.
Nimmo, Frank L., . . . . .	Cambridge.

Rice, Warren E., . . . . .	Ashland.
Saunders, Russell L., . . . . .	Boston.
Sheridan, Edward B., . . . . .	Lowell.
Stanley, Edward S., . . . . .	Whitman.
Waite, Frederick T., . . . . .	Winthrop.

*Class to graduate, March, 1916.*

Berglund, C. Edwin, . . . . .	Brockton.
Congdon, Harold R., . . . . .	Boston.
Elder, Randall F., . . . . .	East Boston.
Gorman, Paul, . . . . .	Haverhill.
Harrington, George E., . . . . .	Worcester.
Jakmauh, Peter J., . . . . .	South Boston.
Mahoney, J. Prescott, . . . . .	West Wareham.
Martell, Charles A., . . . . .	Somerville.
Perrin, Frank M., . . . . .	Worcester.
Phillips, Alexander J., . . . . .	Easton.
Reed, Carleton G., . . . . .	Lexington.
Rylander, John A., . . . . .	Springfield.
Simmons, John W., . . . . .	Springfield.
Stevens, Percy C., . . . . .	West Barnstable.
Thomas, William W., . . . . .	Randolph.
Wadleigh, George E., . . . . .	Boston.

*Class to Graduate, October, 1916.*

Bain, Joseph A., . . . . .	Lawrence.
Beauvais, Waldo H., . . . . .	Worcester.
Bianchi, Albert, . . . . .	Worcester.
Browne, Paul H., . . . . .	Roslindale.
Chase, Howard U., . . . . .	Nantucket.
Collins, Clayton W., . . . . .	Waquoit.
Condrey, Joseph P., . . . . .	Lowell.
Crowell, John T., Jr., . . . . .	Gloucester.
Dunphe, Richard H., . . . . .	Brockton.
Erickson, John, . . . . .	New Bedford.
Fickett, Edward, . . . . .	East Boston.
Fletcher, Edwin T., . . . . .	Springfield.
Graham, Austin P., Jr., . . . . .	Everett.
Guba, Henry A., . . . . .	New Bedford.
Gurney, Darrough S., . . . . .	Marion.
Ireland, Harold S., . . . . .	Somerville.
Kenney, Arthur J., . . . . .	Brookline.
Lord, William E., . . . . .	Springfield.
Lufkin, Thomas B., . . . . .	Gloucester.
Millin, Anthony P., . . . . .	Ipswich.

Paine, Byron H., . . . . .	New Bedford.
Pilkington, John E., . . . . .	Mansfield.
Preston, William M., . . . . .	Beverly.
Sanford, Harold W., . . . . .	Springfield.
Standley, Richard A., . . . . .	Beverly.
Stanley, Clifford E., . . . . .	Salem.
Wilcox, Fred E., . . . . .	Indian Orchard.
Woodaman, Lewis E., . . . . .	Worcester.

*Class to Graduate, March, 1917.*

Boyd, Dwight W., . . . . .	Randolph.
Cahill, J. Francis, . . . . .	Salem.
Collins, Augustus R., . . . . .	Waltham.
Crosbie, Percy A., . . . . .	Everett.
Dennen, Charles R., . . . . .	Gloucester.
Foy, John T., . . . . .	Bridgewater.
Francis, Earl S., . . . . .	Athol.
Goldsmith, Frederick, . . . . .	Belmont.
Hopkins, Richard H., . . . . .	West Somerville.
James, Herbert A., . . . . .	Sherborn.
Jensen, Ernest C., . . . . .	Provincetown.
Keating, Leo C., . . . . .	Woburn.
Kingsbury, Luther C., . . . . .	Wellesley Hills.
Moore, Frank M., . . . . .	Forest Hills.
Nichols, Philip G., . . . . .	Peabody.
Roswall, Clifford, . . . . .	Medford.
Sheridan, Robert H., . . . . .	Stoneham.
Upton, John, . . . . .	Upton.

*Class to Graduate, October, 1917.*

Atwood, Franklin B., . . . . .	Nantucket.
Barton, Alan R., . . . . .	Winthrop.
Borden, Alton F., . . . . .	Fall River.
Budd, Rowland, . . . . .	Haydenville.
Childs, George P., . . . . .	Cotuit.
Cleveland, Carrol B., . . . . .	Vineyard Haven.
Cornell, George H., . . . . .	New Bedford.
Freeman, Ivan, . . . . .	East Orleans.
Hewes, George P., . . . . .	Berlin.
Huffman, Charles F., . . . . .	Waltham.
Hurld, Bernard F., . . . . .	Stoneham.
Levine, Harry, . . . . .	Cambridge.
Little, Philip H., . . . . .	Holbrook.
Lyon, Rupert E., . . . . .	Roxbury.
MacLaughlin, Sydney L., . . . . .	Wollaston.

MacWhinnie, Donald, . . . . .	New Bedford.
Massey, Arthur, . . . . .	Lawrence.
McGourty, James A., . . . . .	Worcester.
McLaren, David M., . . . . .	Dedham.
Melcher, Andrew P., . . . . .	Sharon.
Murphy, Arthur D., . . . . .	Beverly.
Noonan, John D., . . . . .	Mansfield.
Phelan, Arthur S., . . . . .	East Lynn.
Plummer, Kenneth H., . . . . .	Revere.
Prescott, Charles E., . . . . .	Boston.
Raby, Ernest E., . . . . .	North Easton.
Roberts, Stanley F., . . . . .	Springfield.
Rowe, A. Henry, . . . . .	Roslindale.
Stevens, Ralph S., . . . . .	Dorchester.
Storey, William W., . . . . .	Stoneham.
Susmann, Herbert W., . . . . .	Dorchester.
Swain, Harold S., . . . . .	Cambridge.
Thresher, Russell W., . . . . .	Southbridge.
Wilson, Bradford S., . . . . .	Quincy.
Wyatt, Ernest V., . . . . .	Boston.

#### APPROPRIATIONS.

The appropriations for the school for the fiscal year 1915, from Dec. 1, 1914, to Nov. 30, 1915, are here accounted for as follows: —

##### *Current Expenses.*

Appropriation, . . . . .	\$62,000 00
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##### Expended: —

Pay roll, . . . . .	\$31,822 85
Provisions, . . . . .	16,249 14
Seamanship department, . . . . .	4,272 19
Engineering department, . . . . .	5,869 60
Instruction, . . . . .	725 69
Miscellaneous, . . . . .	3,079 48

Total amount expended, . . . . .	\$62,018 95
Less balance allowed from 1914, . . . . .	20 00

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61,998 95

Balance unexpended, . . . . .	\$1 05
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*Office Expenses.*

Appropriation, . . . . .		\$6,000 00
Expended: —		
Salaries, . . . . .	\$3,158 00	
Rent of office and janitor's service, . . . . .	1,114 00	
Advertising, . . . . .	354 50	
Printing, . . . . .	575 37	
Stationery and postage, . . . . .	355 15	
Telephone and telegrams, . . . . .	195 40	
Commissioners' expenses, . . . . .	79 74	
Miscellaneous, . . . . .	170 80	
	<hr/>	
Total amount expended, . . . . .	\$6,002 96	
Less amount allowed by Retirement Association, . . . . .	5 31	
	<hr/>	5,997 65
		<hr/>
Balance unexpended, . . . . .		\$2 35

Respectfully submitted,

JOHN F. MERRY, *Chairman*,  
 REAR ADMIRAL, U. S. N. (RETIRED).  
 WILLIAM E. MCKAY.  
 CLARENCE E. PERKINS.

BOSTON, Jan. 1, 1916.

## FEDERAL AND STATE LEGISLATION.

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### AUTHORITY OF THE UNITED STATES.

H. R. 24145. APPROVED MARCH 4, 1911.

(Original Act passed June 20, 1874.)

#### AN ACT FOR THE ESTABLISHMENT OF MARINE SCHOOLS, AND FOR OTHER PURPOSES.

That the Secretary of the Navy, to promote nautical education, is hereby authorized and empowered to furnish, upon the application in writing of the governor of a State, a suitable vessel of the navy, with all her apparel, charts, books, and instruments of navigation, provided the same can be spared without detriment to the naval service, to be used for the benefit of any nautical school, or school or college having a nautical branch, established at each of the following ports of the United States: Boston, Philadelphia, New York, Seattle, San Francisco, Baltimore, Detroit, Saginaw, Michigan, Norfolk, and Corpus Christi, upon the condition that there shall be maintained at such port a school or branch of a school for the instruction of youths in navigation, steamship-marine engineering, and all matters pertaining to the proper construction, equipment, and sailing of vessels or any particular branch thereof.

SECTION 2. That a sum not exceeding the amount annually appropriated by any State or municipality for the purpose of maintaining such a marine school or schools or the nautical branch thereof is hereby authorized to be appropriated for the purpose of aiding in the maintenance and support of such school or schools: *provided, however*, that appropriations shall be made for one school in any port heretofore named in section one and that the appropriation for any one year shall not exceed twenty-five thousand dollars for any one school.

SECTION 3. That the President of the United States is hereby authorized, when in his opinion the same can be done without detriment to the public service, to detail proper officers of the navy as superintendents of or instructors in such schools: *provided*, that if any such school shall be discontinued, or the good

of the naval service shall require, such vessel shall be immediately restored to the Secretary of the Navy and the officers so detailed recalled: *and provided further*, that no person shall be sentenced to or received at such schools as a punishment or commutation of punishment for crime.

SECTION 4. That all laws and parts of laws in conflict herewith are hereby repealed.

## AUTHORITY OF THE STATE OF MASSACHUSETTS.

CHAPTER 45, REVISED LAWS, AS AMENDED BY CHAPTER 171, ACTS OF 1903,  
AND CHAPTER 224, ACTS OF 1913.

### THE NAUTICAL SCHOOL.

SECTION 1. There shall be a board of commissioners of the Massachusetts nautical school consisting of three citizens of the commonwealth, one of whom shall annually, before the first day of July, be appointed by the governor, with the advice and consent of the council, for a term of three years from said first day of July.

SECTION 2. Said commissioners shall serve without compensation, but they shall be reimbursed by the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 3. They shall provide and maintain a nautical school for the instruction and training of pupils in the science and practice of navigation, shall provide accommodations for the school on board a proper vessel, purchase and provide books, stationery, apparatus and supplies needed in the work of the school, appoint and remove instructors and other necessary employees, determine their number and compensation, fix the terms and conditions upon which pupils shall be received and instructed in the school and be discharged or dismissed therefrom, establish all regulations necessary for its proper management and shall from time to time provide for cruises in or from the harbor of Boston.

SECTION 4. They may receive from the United States government, and use for the accommodation of the school, such vessels as the secretary of the navy may detail.

SECTION 5. They may annually expend such sum as the general court may from year to year appropriate, which shall be paid by the commonwealth; and they shall annually submit an estimate of the expense required in making cruises in or from the

harbor of Boston, and the amount of said estimate, after approval by the governor and council and subject to the provisions of chapter six, shall be advanced to the commanding officer of the vessel detailed therefor, who shall give a bond in the sum of ten thousand dollars, with sureties approved by the governor and council, for its proper disbursement. Said advance shall not exceed ten thousand dollars for six months, and shall be accounted for by properly approved vouchers within thirty days after the termination of said cruises.

SECTION 6. They shall annually, in January, report to the general court a detailed statement of all moneys appropriated and expended during the preceding year for the nautical school, stating the results of the work during such year and making any necessary recommendations.



MASS.  
DOCS.  
COLL.

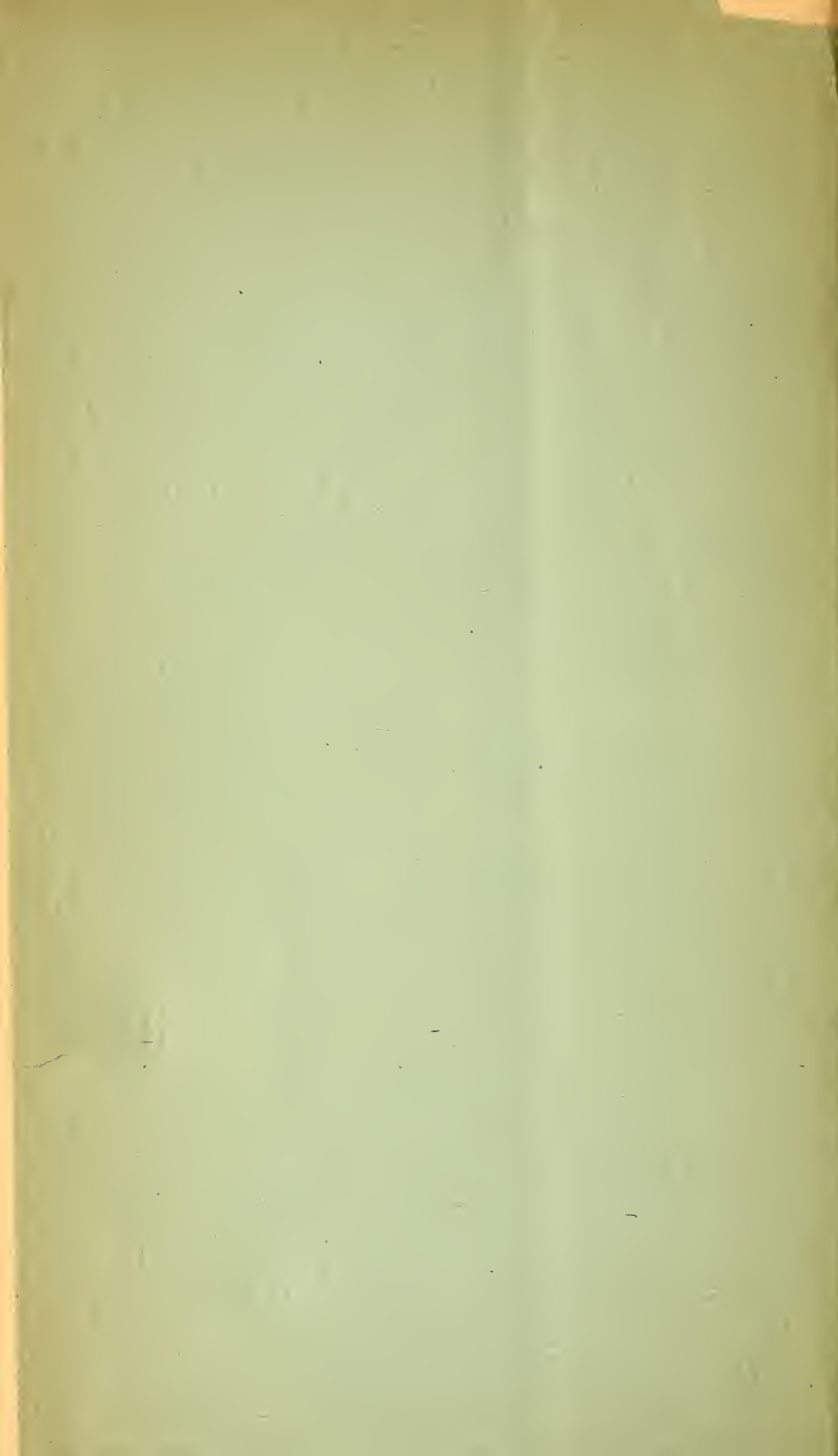
SEVENTY-FIFTH ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

1916

JANUARY 1, 1917

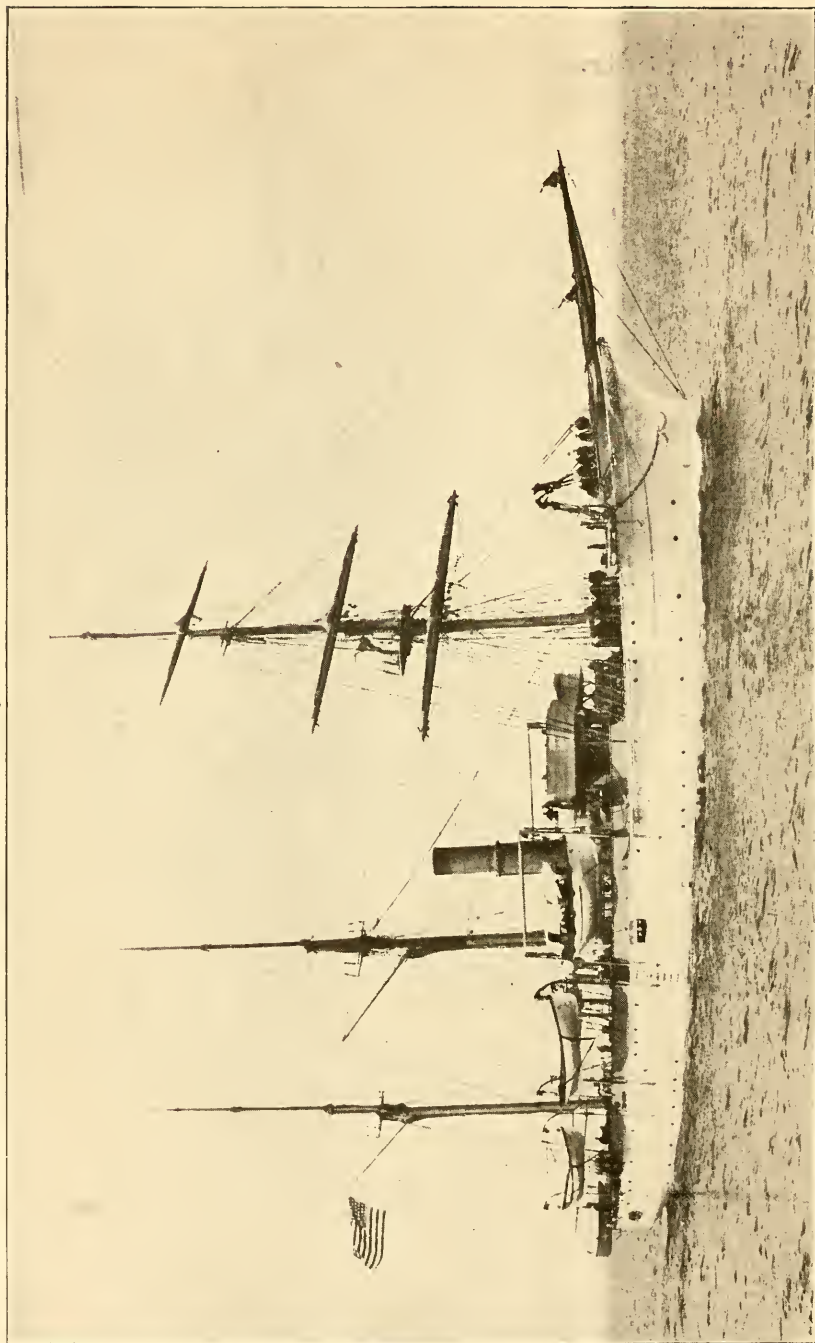


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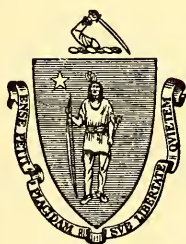


The Massachusetts Nautical Training Ship "Ranger" Leaving Boston Harbor on the Summer Cruise.

TWENTY-FIFTH ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

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PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

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COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL

2A PARK STREET, BOSTON

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FRANCIS T. BOWLES, *Chairman*

WILLIAM E. MCKAY

CLARENCE E. PERKINS

---

WILLIAM H. DIMICK, *Secretary*





# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The Commissioners have the honor to submit their report of the operations of the school for the year 1916, and respectfully recall to your notice that this completes the twenty-fifth year of the maintenance of this maritime school by the Commonwealth.

### THE PURPOSE OF THE NAUTICAL SCHOOL AND THE COURSE OF INSTRUCTION.

The course of instruction, given in detail later in this report, covers two years, and is intended to prepare young men for service as deck and engineer officers in the merchant marine. The instruction is carried out on board the U. S. S. "Ranger," a steam sloop-of-war, loaned to the Commonwealth by the United States Navy Department. The students are divided into four classes, one graduating each spring and fall; they are instructed by the officers of the ship, who also on the summer cruise, extending from May until October, perform the regular ship duties of their positions. During the winter months the "Ranger" is moored at the North End Park, in Boston, and the school continues on board the ship. Students are admitted by competitive examination in the spring and fall. The expense to those taking the course is limited to the cost of clothing, books, etc., amounting to \$85 the first year and \$25 the second year.

## THE SCHOOL RECORD.

During the year there have been 175 students on the rolls of the school, the sons of citizens of Massachusetts. They came from 74 cities and towns of the Commonwealth, and their previous education was as follows: high schools, 144; academies, 8; technical schools and business colleges, 4; grammar schools, 19. The average age of cadets at entrance was seventeen years. There have been graduated 38 cadets, 16 in the spring and 22 in the autumn. The number of cadets enrolled in the school at present is 100.

## THE FUTURE PROSPECT FOR GRADUATES.

The demand of the merchant marine for the services of the graduates is much greater than the supply. So far as our records show, about 75 per cent. of the 761 graduates of the school are serving in, or in connection with, the merchant marine. In recent years the proportion entering the merchant service has continued to increase.

Graduates of the school entering the merchant marine of the United States, under the present laws and regulations of the Department of Commerce, are eligible for a certificate as able seamen, and after one year's service at sea, having attained the age of nineteen years, are eligible for examination for a license as second officer or second assistant engineer. On arriving at the age of twenty-one years they are eligible for a license as master or chief engineer, provided the other conditions requisite are fulfilled.

The laws of the United States require that the watch officers of vessels registered for the foreign trade shall be citizens of the United States, except that under a recent provision of the law the President is authorized to temporarily suspend this provision in reference to foreign-built ships admitted to United States registry.

During the last two years the tonnage of vessels under the United States flag registered for the foreign trade has more than doubled, the increase for the first year having been largely made by the foreign vessels admitted to United States registry.

United States merchant vessels in the foreign trade on June 30, 1916, totaled 2,191,715 tons.

During the past year there has been unprecedented activity in the shipyards of the United States in the construction of vessels for the coastwise and foreign trade under the United States flag. This activity continues and shows every prospect of increasing, thereby creating a demand for officers for merchant vessels who are citizens of the United States.

On Nov. 1, 1916, according to the report of the Bureau of Navigation, Department of Commerce, steel merchant vessels were building or under contract to be built in private American shipyards to the number of 417, of 1,479,946 gross tons. This amount corresponds with that under construction in the shipyards of Great Britain during normal times of maximum activity.

#### NATIONAL AID.

The current naval appropriation act contains a provision authorizing the Secretary of the Navy to reimburse the Commonwealth for expenditures actually made for maintaining the nautical school to the extent of \$25,000 a year for the five years beginning in 1911. Upon request of the commissioners, the Auditor of the State has made application to the Navy Department for the authorized reimbursement to the amount of \$125,000.

It is expected that the Secretary of the Navy will continue to present to Congress an annual estimate of \$25,000 on account of the Massachusetts Nautical School, in accordance with the law of March 4, 1911.

#### THE COMMISSION.

In the death of Rear Admiral John F. Merry, U. S. N., retired, which occurred in Washington on May 29, 1916, the Commissioners suffered the loss of their chairman. The following minute was adopted: —

*Resolved*, That the Commissioners of the Massachusetts Nautical School express their sense of the loss which the Commonwealth has suffered in the death of Rear Admiral John F. Merry, U. S. N. (retired). He was the first superintendent of the Nautical School, and in three years

of this valuable service he laid the foundation, and established the initial success, of the school. During the past five years he has been chairman of the Board of Commissioners, a wise counsellor, bringing to the work the ripened judgment of a long and successful career in the merchant marine and in the United States Navy. Admiral Merry was endowed with a pleasant and attractive personality; he was unpretentious in manner, forceful, considerate, earnest, sincere, straightforward and seamanlike; his world-wide travel and varied experience gave him a broad outlook and large sympathies.

Respected and cherished, his name will always be associated with nautical education in Massachusetts as one of its most active workers and loyal supporters.

On July 5, 1916, Mr. Francis T. Bowles of Barnstable was appointed a Commissioner, and on July 7, 1916, was elected chairman.

On July 1, 1916, Mr. Clarence E. Perkins of Winthrop was reappointed Commissioner.

#### RECOMMENDATION.

The most desirable improvement of the Nautical School which is in the power of the State to provide would be a permanent berth for the schoolship on property of the Commonwealth in such location that a building would be available having study and exercise rooms.

The "Ranger" in recent years has been berthed at the North End Park in the winter time, and the spar deck being housed in gives space for the conduct of school exercises. It is difficult to conduct a school on board a small vessel on which must simultaneously proceed all the work of the maintenance, subsistence and lodging of the cadets, crew and officers. If the school had a permanent berth on property which it could police, excluding undesirable visitors and giving sufficient play and drill grounds for the cadets, and school and exercise rooms, the health of the school could be maintained with greater assurance and the instruction given with greater efficiency.

#### APPRECIATION.

The Commission desires to express its appreciation for the excellent performance of duty of the staff of the school, and also of that of the Commission's secretary.

### THE SUMMER TERM.

The summer term began on April 12, with a total enrolment of 104 cadets, including 32 new entries. The preliminary cruise was made to Provincetown, Yorktown, Va., Washington, D. C., Annapolis, Md., Norfolk, Va., and Hampton Roads, returning to Boston on May 18 for the annual inspection by His Excellency the Governor and Council, which was held on May 23 in Boston Harbor, and included various drills by the cadets both at anchor and under way, followed by an address by Governor McCall.

On May 27 the "Ranger" sailed from Boston for St. Thomas. After visiting Havana, Cuba, the ship returned to Norfolk. A call was made at Newport News before returning to the New England coast, where in suitable ports the cruise was completed.

### SUPERINTENDENT'S REPORT.

Following is the report of Capt. P. W. Hourigan, U. S. N., superintendent of the school: —

The cruise resolved itself in three phases, — first, the preliminary or "shake-down" cruise; second, the off-shore period; third, the coasting period, at the end.

The conditions in Europe rendered it inadvisable to cross the Atlantic, so the choice was restricted to our own waters and the nearer West Indies.

### THE PRELIMINARY CRUISE.

The ship sailed from Boston on April 18 and visited Provincetown, Yorktown, Va., Washington, D. C., Annapolis, Md., Norfolk, Va., and Hampton Roads, returning to Boston on May 18 for the Governor's inspection, which was held on May 23.

This month was most profitably spent. A mild climate suitable for the initial work was a special advantage. Stopping over night at Provincetown, the ship sailed for the York River, Va., anchoring off Yorktown; a stay of six days was made there, the time being occupied by detailed instruction in boats, sail drills and the emergency drills. Liberty was given, and the cadets had an opportunity to see the place, so full of historical reminders of the Revolutionary War. Washington was next visited, and through the courtesy of the commandant of the Navy Yard, Rear Admiral J. G. Glennon, U. S. N., the ship was berthed alongside the yard. The cadets were given every opportunity to inspect the gun shops.



Through the special efforts of Hon. James A. Gallivan and Hon. Ernest W. Roberts, Massachusetts Representatives in Congress, the officers and cadets were afforded a special meeting with the President of the United States at the White House, a most signal honor and one highly appreciated.

Annapolis was next visited, and the superintendent of the Naval Academy, Capt. E. W. Eberle, U. S. N., extended to the ship a berth alongside the academy close to the midshipmen's barracks. Captain Eberle showed the ship many marked courtesies, detailed midshipmen officers to show the cadets through the academy, and was in every way solicitous that our visit should be both profitable and pleasant.

In all this time, both in port and when under way, all the various preliminary exercises were carried on, modifying the regular routine, however, to suit the advantages offered in inspecting these government plants and in seeing the cities visited.

The ship proceeded from Annapolis to Norfolk, where coal was taken on board. The cadets inspected the Norfolk Navy Yard. Sunday was spent at Hampton Roads, and on May 14 the ship sailed for Boston, arriving on the 18th.

On May 23 the annual inspection was held by His Excellency, the Governor of the Commonwealth, accompanied by State officials and various invited guests. The cadets performed the various drills and exercises, both at anchor and under way, in a smart and seamanlike manner.

#### THE CRUISE TO THE WEST INDIES.

Following the preliminary cruise a short leave was given the cadets, and on May 27 the ship sailed for St. Thomas. San Juan, P. R., was scheduled as the first port to be visited, but owing to reported health conditions there it was decided to omit all Porto Rican ports. In making this passage the ship made well to the eastward in the hope that the trade winds would be picked up and part at least of the passage be made under sail alone. Only light easterly winds were met, however. A stay of three days was made in St. Thomas, when the ship sailed for Havana. The course was laid to the northward of Porto Rico and Haiti through the Bahama Passage. The winds were generally fair but light, and sail was made whenever it could be of assistance. Havana, as always, proved an interesting city to visit, but the heavy rains prevailing at that season interfered much with the routine. After a stay of four days the ship sailed for Hampton Roads. The usual track in the Gulf Stream through the Florida Straits was followed, affording the cadets the opportunity to note this interesting phenomenon (on one running day the distance made good was helped 104 miles by the set of the stream).

Coal was taken on at Norfolk and a stop made at Newport News, where the officials of the Newport News Shipbuilding Works courteously afforded the cadets an opportunity to inspect the plant.







## THE COASTING PERIOD OF THE CRUISE.

The ship sailed from Hampton Roads for Gardiner's Bay on June 24, and early in the morning of June 26 was fouled by a vessel which proved to be the British converted cruiser "Calgarian." The "Calgarian" was cruising (probably patrolling) without lights, and gave no warning of her presence until too late to avoid fouling; she crossed close under the "Ranger's" bows, and carried away all our head booms, — practically the only damage done us. I deemed it advisable to proceed to Boston at once, and on arrival there requested the commandant of the naval station to follow the usual course for vessels of the navy under circumstances of damage or collision. Accordingly, a naval board of investigation was convened, which fully exonerated the officers and crew of the "Ranger" from any blame or neglect.

The commandant of the Navy Yard, Capt. W. R. Rush, U. S. N., following his never-failing practice of doing everything possible for the ship's interest, saw to it that repairs were promptly made so that we resumed cruising on July 11. The remainder of the time up to our return to Boston, on September 13, was spent on the coast as shown in the itinerary.

While the cruise on the whole was satisfactory from an instructive point of view, it lacked the great advantages which can be had only in long periods of deep-water cruising, and which can be resumed, it is to be hoped, when the conditions in European waters will permit. In all our passages, off-shore deep-sea navigation was given every attention. Cruising along the coast had its advantages in that a very unusual opportunity was afforded for practice in piloting, and the constant use of charts and methods of "fixing." There was much fog, and this condition, too, afforded valuable exercise and experience.

The fouling with the "Calgarian" furnished an actual emergency at sea, calling for promptness in meeting a situation which had all the elements of actual danger. The cadets met the situation most creditably. All boats were provisioned and ready for lowering promptly and with no more confusion than if it were a drill. As a proof of this, both ships, following the usual practice of naval vessels, sent a boat to inquire for the other, offer assistance, etc. The "Ranger's" boat had shoved off on this mission several minutes before the "Calgarian's" boat came alongside of us, and it is to be presumed that the "Calgarian," cruising as she was, a belligerent vessel without lights, was prepared to an unusual degree for an emergency.

As the cadets had "all night in" during most of the cruise it was possible largely to utilize the afternoon "watch below" at instruction in school subjects. Classes were regularly held in arithmetic for the newly entered cadets, and English subjects for the senior ones. It is found by experience that the newly entered cadets, who have, in many cases, been some time out of school, just before entering need considerable reviewing in the elementary subjects to enable them to take up the subjects of this school with facility.

Cadets of the senior classes were given the most responsible duties, and with only the necessary supervision by the officers. They stood regular officer of the watch duty in port and at sea, with instructions that they were not to be interfered with unless to actually prevent accidents or wrong methods. They met the situation, on the whole, very creditably.

Whenever the ship was in port on Sunday an opportunity was given the cadets to attend church; when at sea, the commanding officer held a short service.

The health of all hands was in general very good, as shown by the medical officer's report. The physical development would have shown better results had the opportunity been present for more off-shore cruising.

The conduct of the cadets left but little to be desired. There were few offences against the discipline of the ship of any seriousness. Overstaying leave was practically unknown, as were any cases of misconduct ashore. It was most pleasing, in fact, to receive, as I did frequently, very favorable comments from people on shore as to the good appearance and behavior of cadets on liberty. I was particularly pleased to receive such comments from the superintendent of the Naval Academy and from the commandant of the Naval Training Station at Newport, both institutions of intensive training and high standards of requirements for young men.

In all foreign ports visited the naval practice of exchanging calls with civilian officials on shore was followed, as was that of exchanging visits with foreign and our own naval vessels when such were fallen in with. This is, I believe, an excellent object-lesson for the cadets, and helps maintain the dignity of the ship.

It was with deep regret that all on board received the news of the death of Rear Admiral J. F. Merry, U. S. N., the chairman of the Board of Commissioners. All were deeply sensible of his great interest in the school, his firm and kindly guidance, and the inspiration which his own career furnished to those entering on a seafaring life. As a mark of respect to his memory colors were displayed at half mast on the day following the receipt of the news of his death, and all but necessary ship's work was suspended.

The following outlines the instruction carried on under the various departments:—

#### SEAMANSHIP.

Upon the departure from Boston on the preliminary cruise, a very strenuous routine was begun.

For the first few days out instruction in all general drills was given, followed by the drills themselves.

Upon arrival at Yorktown, and during the stay there, sail drill and drill with boats under oars were held. The late afternoon was devoted to the ship's work, the ship being painted in this port.

While in Washington and Annapolis cadets were given only one drill each day, the remainder of the time being devoted to sightseeing, the



National Buildings, the White House, the Washington Navy Yard and gun factory and the Naval Academy being visited.

A short stay in Norfolk was devoted to an inspection of the Norfolk Navy Yard and to coaling ship.

When under way, and when weather conditions permitted, exercise at man overboard was held.

By the end of the preliminary cruise the ship was well shaken down, and cadets went through the emergency drills with the snap so essential to a smart ship.

At the beginning of the regular cruise, May 27, 1916, the routine was modified to give a study period for one watch in the afternoon, and an evening period for instruction in signals for the first and second classes. This was continued throughout the cruise.

During the time in the tropics no strenuous exercises were given, this period being devoted to instruction and light drills.

After the return north the cruise was interrupted by the collision with H. M. S. "Calgarian," but from this most valuable experience was obtained in unrigging and rerigging the ship.

In the harbors of Boothbay and Nantucket particular attention was given to small-boat exercises, both under oars and sail.

About the middle of the cruise the watch bill was shifted so that all cadets were familiarized with both square, and fore and aft sail.

Other exercises held for drill purposes or necessitated by circumstances were kedging with a 1,500 pound anchor, sending down and fishing top-sail yard, assisting windlass with deck tackles when weighing the anchor, overhauling ground tackle, abandoning ship with all hands, and small-arms practice.

On days when inclement weather prevented drills in the open, the first and second classes were given instruction in sail making and wire splicing, and the third and fourth classes were given knotting and splicing.

The afternoons were devoted to study and theoretical instruction for one watch and ship work for the other, the necessary overhauling and refitting of the ship being done in these periods.

#### NAVIGATION.

While at sea, out of sight of land, cadets of the first and second classes were required to take sights and work practical deep-sea navigation. This work included the finding of noon position by observation and dead reckoning, course and distance made good since preceding noon, set and drift of current, and the deviation of the compass by observation. Practice was given in taking observations of the stars, planets and moon, as well as the sun. Due to the comparatively short time at sea, the work in practical nautical astronomy was necessarily limited. Sufficient instruction and practice was given with the sextant, however, so that these classes will easily be able by their own efforts to perfect themselves in this branch of navigation. The complete course in theoretical navigation

given the first class during the winter term, and which the second class will receive this coming winter, combined with the practical work of the cruise, will give both classes an excellent groundwork in this subject.

As the greater part of our cruising was in sight of land, excellent opportunities were afforded to put into practice the various problems of piloting. Cadets were required to take and plot cross bearings, bow and beam bearings, and to perfect themselves in the use of charts, sailing directions, tide tables, etc. In this work great interest was shown. In connection with this kind of work I considered coasting by night and the entering and leaving ports during darkness to be valuable practical instruction. Much running was accomplished during thick weather, and the opportunity was given to impress upon the cadets the precaution necessary to take while running under these conditions, and to acquaint them with the use of both aerial and submarine fog signals.

While in port classes were held afternoons. Instruction and practical work was given in chronometer comparisons, care and winding of chronometers, time signals, use of three-armed protractor, artificial horizon, and a general review of the problems of navigation.

The patent sounding machine was used frequently, and practice was given with the coasting lead and hand leads.

The use of the radio apparatus to receive time signals for chronometer comparisons was emphasized.

The cadets of the third class received instruction in the use of the various instruments used in navigation, dead reckoning, keeping the log book, elements of piloting, rules of the road, systems of buoyage, aids to navigation, etc. This kind of work at sea is easily and effectively taught, as so many practical illustrations constantly present themselves to refresh the memory of the students and automatically impress upon their minds the essential points.

#### MEDICAL.

During the summer cruise twelve cadets have been on the sick list, — seven for one day only, three for two days, one for nine days' illness with tonsillitis, and one for eight days with a bronchial affection, making a total of thirty days.

Measurements and weights have been taken of all cadets, with the following results: at the beginning of the cruise the average height was 5 feet 7.22 inches, and the weight 134.13 pounds. At the end of the cruise these had increased to 5 feet 7.30 inches, and 136.44 pounds, respectively.

#### STEAM.

Senior cadets were instructed in the following: firing, oiling, operation of main and auxiliary machinery, overhaul and repairs to same in port and at sea; valve setting for main and variable expansion valves; pipe systems; log writing; coal consumption and checking same as received, stowed and expended; inspection, care and preservation of boilers, testing water in same for salt and acidity; taking indicator diagrams and

reading same for defective valve setting; finding mean pressure from diagram by ordinates and planimeter; working out horsepower of engines by simple rules and logarithms; problems on weight and lever, spring-loaded safety valves, boilers and staying of same, propellers; fuel consumption and speed; care and caution necessary in using steam and in starting and stopping engines; care and preservation of hull and fittings.

Junior cadets were instructed as follows: coal passing, firing, names and uses of firing tools and of boiler fittings.

### ELECTRICITY.

First and second classes nautical cadets were given instruction and practice in the use of Continental Morse Code for night signaling, each cadet being required to know the code and able to send and receive by sight or sound.

First and second classes engineer cadets were given instruction and practice in the repairs and care of the ship's electrical plant. Under the supervision of the electrician each cadet was assigned full charge of the ship's electrical apparatus, being required to tend the starting, shifting load and stopping dynamos, and to make necessary repairs to dynamos, motors, lights, call bells and batteries. Parts of the lighting circuits were overhauled and conduit installed and renewed. Under careful supervision the cadets were required to do the work as far as practicable.

Cadets were selected for radio instruction during the winter term, passed the government examination and received radio licenses in March.

Members of the radio detail were assigned regular radio watch at sea, keeping a record of calls and communications heard. They assisted in the care and upkeep of the set, making repairs to antenna at sea, re-winding spark gap motor armature and other repairs as necessary.

### CRUISES OF 1916.

The itinerary was as follows: —

#### *Preliminary Cruise.*

April 12, cadet officers, petty officers and fourth class reported on board; April 14, first, second and third classes reported on board.

PORTS.	Distance (Miles).	Left.	Arrived.
Boston-Provincetown, . . . . .	50	Apr. 18	Apr. 18
Provincetown-Yorktown, Va., . . . . .	480	Apr. 19	Apr. 21
Yorktown-Washington, D. C., . . . . .	152	Apr. 27	Apr. 28
Washington-Annapolis, Md., . . . . .	160	May 4	May 5
Annapolis-Norfolk, Va., . . . . .	150	May 9	May 10
Norfolk-Fortress Monroe, Va., . . . . .	12	May 12	May 12
Fortress Monroe-Boston, . . . . .	500	May 14	May 18
	1,504		

May 23, Governor's inspection.



*Off-shore and Coasting Cruise.*

PORTS.	Distance (Miles).	Left.	Arrived.
Boston-St. Thomas, . . . . .	1,723	May 27	June 5
St. Thomas-Havana, . . . . .	1,039	June 8	June 13
Havana-Fortress Monroe, . . . . .	985	June 17	June 21
Fortress Monroe-Newport News, . . . . .	8	June 21	June 21
Newport News-Norfolk, . . . . .	12	June 21	June 21
Norfolk-Fortress Monroe, . . . . .	12	June 24	June 24
Fortress Monroe-Boston, . . . . .	530	June 24	June 28
Boston-President Roads, . . . . .	7	July 11	July 11
President Roads-Boothbay Harbor, . . . . .	125	July 12	July 12
Boothbay Harbor-Nantucket, . . . . .	160	July 19	July 20
Nantucket-Vineyard Haven, . . . . .	27	July 24	July 24
Vineyard Haven-Dutch Island, . . . . .	40	July 25	July 25
Dutch Island-Gardiner's Bay, . . . . .	55	July 26	July 26
Gardiner's Bay-New London, . . . . .	20	July 28	July 28
New London-Gardiner's Bay, . . . . .	20	July 31	July 31
Gardiner's Bay-New London, . . . . .	20	Aug. 3	Aug. 3
New London-Nantucket, . . . . .	105	Aug. 7	Aug. 8
Nantucket-Woods Hole, . . . . .	30	Aug. 21	Aug. 21
Woods Hole-Edgartown, . . . . .	36	Aug. 22	Aug. 22
Edgartown-Vineyard Haven, . . . . .	16	Aug. 25	Aug. 25
Vineyard Haven-Newport, . . . . .	45	Aug. 29	Aug. 29
Newport-Vineyard Haven, . . . . .	45	Sept. 3	Sept. 3
Vineyard Haven-Nantucket, . . . . .	28	Sept. 5	Sept. 5
Nantucket-Provincetown, . . . . .	75	Sept. 10	Sept. 10
Provincetown-Boston, . . . . .	50	Sept. 13	Sept. 13
	5,213		

Sept. 15, 1916, graduation exercises.

COAL REPORT.		Tons.
On hand and received, . . . . .		781.9
Expended, . . . . .		729.2
Remaining on hand, . . . . .		52.7
Expended as follows:—		
Moving ship, . . . . .		445.8
Dynamos and other auxiliaries, . . . . .		223.8
Distilling, . . . . .		40.2
Galley, . . . . .		19.4
Total, . . . . .		729.2

## THE WINTER TERM.

The graduation exercises were held on board the "Ranger" at the Charlestown Navy Yard on September 15. Diplomas were delivered to 22 cadets. The exercises began with prayer by the chaplain of the Navy Yard, and closed with an address by Hon. Frederick P. Fish, chairman of the Massachusetts State Board of Education.

The winter term began on October 23, with an entry of 29 cadets selected by competitive examination from 80 applicants. Forty-two of these qualified, but vacancies were available for only 29, the number being limited by the accommodations of the "Ranger."

A course of lectures on appropriate subjects to supplement the regular studies, delivered by persons outside the school, is being arranged for delivery on board the "Ranger" on Wednesday evenings. Those so far provided are as follows: —

Capt. Eugene E. O'Donnell, Supervising Inspector Fifth District. Subject: The United States Steamboat Inspection Service.

Mr. Francis T. Bowles. Subject: Preparedness.

Mr. Wilfred O. White. Subject: Compass Adjustment.

Mr. Winthrop L. Marvin (two lectures). Subject: The American Merchant Marine.

Mr. W. L. Turner, Chief Admeasurer, Bureau of Navigation, Washington, D. C. Subject: Ship Tonnage.

Surgeon M. Victor Safford, United States Public Health Service. Subject: Maritime Quarantine Regulations.

Assistant Naval Constructor Thomas B. Richey, U. S. N. Subject: Salvage Operations.

Assistant Naval Constructor Samuel J. Zeigler, U. S. N. Subject: Stability and Displacement.

Mr. Fitz Henry Smith, Jr. Subject: The Laws and Customs of Salvage.

Following is the study schedule for the winter term of 1916-17: —

*Winter Schedule.*

	First Class, Seamanship.	Second Class, Seamanship.	First Class, Engineers.	Second Class, Engineers.	Third Class, First Section.	Third Class, Second Section.	Fourth Class, First Section.	Fourth Class, Second Section.
Monday { 9-10, . 10-11, . 11-12, . 12-12, 40,	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.	Steam. Study. Mathematics. Study.	Study. Steam. Study. Mathematics.	Navigation. Study. Seamanship. Study.	Study. Navigation. Study. Seamanship.	Seamanship. Study. Steam. English.	Study. Seamanship. English. Steam.
Tuesday { 9-10, . 10-11, . 11-12, . 12-12, 40,	Navigation. Study. English. Study.	Study. Navigation. Study. English.	Steam. Study. Electricity. Study.	Study. Steam. Study. Electricity.	Electricity. Study. Steam. Study.	Study. Electricity. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Wednesday { 9-10, . 10-11, . 11-12, . 12-12, 40,	Seamanship. Study. Navigation. Study.	Study. Seamanship. Study. Navigation.	English. Study. Electricity. Study.	Study. English. Study. Electricity.	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.
Thursday { 9-10, . 10-11, . 11-12, . 12-12, 40,	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.	Seamanship. English. Steam. Study.	English. Seamanship. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Friday { 9-10, . 10-11, . 11-12, . 12-12, 40,	Seamanship. Study. English. Study.	Study. Seamanship. Study. English.	Mathematics. Study. Steam. Study.	Study. Mathematics. Study. Steam.	English. Study. Mathematics. Study.	Study. English. Study. Mathematics.	Electricity. Study. Seamanship. Study.	Study. Electricity. Study. Seamanship.

The above table indicates in a general way the actual studies pursued by each class. Cadets are divided for instruction into sections, with one set of sections made up of cadets of the first and second classes combined, and the other set of the third and fourth classes combined.

The following are the officers and instructors now connected with the school: —

Superintendent and commanding officer, Capt. P. W. Hourigan, U. S. N.  
Executive officer, Lieut. Thalbert N. Alford, U. S. N.  
Navigator, A. Russell Cushing (graduate M. N. S.).  
Watch officer, Chief Boatswain Ernest V. Sandstrom, U. S. N.  
Watch officer, Albert L. Ware (graduate M. N. S.).  
Chief engineer, Machinist John O'Neill, U. S. N.  
Medical officer, Gardner N. Cobb, M.D.  
Paymaster and captain's clerk, Adolph E. Salsburg.  
Electrician, Charles A. Scott.

#### PERSONNEL.

Feb. 29, 1916, Mr. Theodore C. Howe, paymaster and captain's clerk, resigned.

March 1, 1916, Mr. Edward S. Groves appointed paymaster and captain's clerk.

April 10, 1916, Lieut. Thalbert N. Alford, U. S. N., detailed as executive officer.

April 17, 1916, Lieut. Alfred H. Miles, U. S. N., executive officer detached.

April 17, 1916, Mr. Adolph E. Salsburg appointed paymaster and captain's clerk.

April 18, 1916, Mr. Edward S. Groves, paymaster and captain's clerk, resigned.

May 29, 1916, Rear Admiral John F. Merry, U. S. N., retired, chairman of the Board of Commissioners, died.

July 1, 1916, Mr. Clarence E. Perkins of Winthrop reappointed a Commissioner.

July 5, 1916, Mr. Francis T. Bowles of Barnstable appointed Commissioner.

Aug. 13, 1916, Chief Boatswain Albert Seeckts, U. S. N., watch officer, detached.

Aug. 14, 1916, Chief Boatswain Ernest V. Sandstrom, U. S. N., detailed as watch officer.

## MEMBERSHIP OF THE SCHOOL.

*Graduating Class, March, 1916.*

Berglund, C. Edwin, . . . . .	Brockton.
Congdon, Harold R., . . . . .	Roxbury.
Elder, Randall F., . . . . .	Everett.
Gorman, Paul, . . . . .	Haverhill.
Harrington, George E., . . . . .	Worcester.
Jakmauh, Peter J., . . . . .	South Boston.
Mahoney, J. Prescott, . . . . .	West Wareham.
Martell, Charles A., . . . . .	Somerville.
Perrin, Frank M., . . . . .	Worcester.
Phillips, Alexander J., . . . . .	Easton.
Reed, Carleton G., . . . . .	Lexington.
Rylander, John A., . . . . .	Springfield.
Simmons, John W., . . . . .	Springfield.
Stevens, Percy C., . . . . .	West Barnstable.
Thomas, William W., . . . . .	Randolph.
Wadleigh, George E., . . . . .	Boston.

*Graduating Class, September, 1916.*

Bain, Joseph A., . . . . .	Lawrence.
Bianchi, Albert, . . . . .	Worcester.
Browne, Paul H., . . . . .	Roslindale.
Chase, Howard U., . . . . .	Nantucket.
Collins, Clayton W., . . . . .	Waquoit.
Condrey, Joseph P., . . . . .	Lowell.
Crowell, John T., Jr., . . . . .	Gloucester.
Dunphe, Richard H., . . . . .	Brockton.
Erickson, John, . . . . .	New Bedford.
Fletcher, Edwin T., . . . . .	Springfield.
Graham, Austin P., Jr., . . . . .	Everett.
Guba, Henry A., . . . . .	New Bedford.
Ireland, Harold S., . . . . .	Somerville.
Kenney, Arthur J., . . . . .	Brookline.
Lord, William E., . . . . .	Springfield.
Lufkin, Thomas B., . . . . .	Gloucester.
Paine, Byron H., . . . . .	New Bedford.
Pilkington, John E., . . . . .	Mansfield.
Sanford, Harold W., . . . . .	Springfield.
Standley, Richard A., . . . . .	Beverly.
Stanley, Clifford E., . . . . .	Salem.
Wilcox, Fred E., . . . . .	Indian Orchard.

*Class to Graduate, March, 1917.*

Boyd, Dwight W.,	Randolph.
Crosbie, Percy A.,	Everett.
Dennen, Charles R.,	Gloucester.
Foy, John T.,	Bridgewater.
Francis, Earl S.,	Athol.
Hopkins, Richard H.,	West Somerville.
James, Herbert A.,	Sherborn.
Jensen, Ernest C.,	Provincetown.
Kingsbury, Luther C.,	Wellesley Hills.
Moore, Frank M.,	Forest Hills.
Nichols, Philip G.,	Peabody.
Preston, William M.,	Beverly.
Sheridan, Robert H.,	Stoneham.
Upton, John,	Upton.

*Class to Graduate, October, 1917.*

Atwood, Franklin B.,	Nantucket.
Barton, Alan R.,	Winthrop.
Borden, Alton E.,	Fall River.
Budd, Rowland,	Haydenville.
Freeman, Ivan,	East Orleans.
Huffman, Charles F.,	Waltham.
Levine, Harry,	Cambridge.
Little, Philip H.,	Holbrook.
MacLaughlin, Sydney L.,	Wollaston.
MacWhinnie, Donald,	New Bedford.
Massey, Arthur,	Lawrence.
McGourty, James A.,	Worcester.
McLaren, David M.,	Dedham.
Murphy, Arthur D.,	Beverly.
Noonan, John D.,	Mansfield.
Phelan, Arthur S.,	East Lynn.
Plummer, Kenneth H.,	Roxbury.
Raby, Ernest E.,	North Easton.
Roberts, Stanley F.,	Springfield.
Roswall, Clifford,	Medford.
Rowe, A. Henry,	Roslindale.
Storey, William W.,	Stoneham.
Susmann, Herbert W.,	Dorchester.
Thresher, Russell W.,	Southbridge.
Wilson, Bradford S.,	Quincy.
Wyatt, Ernest V.,	Boston.



*Class to Graduate, March, 1918.*

Anderson, Robert P., . . . . .	Melrose.
Blair, Andrew C., Jr., . . . . .	Fall River.
Brown, Karl I., . . . . .	Arlington Heights.
Carden, John R., . . . . .	Haverhill.
Childs, George P., . . . . .	Cotuit.
Clark, Wesley C., . . . . .	Arlington Heights.
Crowley, James J., Jr., . . . . .	North Abington.
Cunningham, George M., . . . . .	Lawrence.
Dean, Ira D., . . . . .	South Natick.
Donlin, John R., . . . . .	Medford.
Evers, Ralph A., . . . . .	Medford.
Fitzgerald, William H., . . . . .	Revere.
Freeman, Joseph, . . . . .	Revere.
Gallagher, William B., . . . . .	Quincy.
Hanson, Waldemar I., . . . . .	Brockton.
Hill, Raphael W., . . . . .	Provincetown.
Hovland, Almer T., . . . . .	Newton Lower Falls.
Hurld, Bernard F., . . . . .	Stoneham.
Lowry, James H., . . . . .	Canton.
Mackie, Gordon C., . . . . .	Brookline.
McKenzie, James C., . . . . .	Roxbury.
Newman, Karl W., . . . . .	Brockton.
Nichols, Harold V., . . . . .	Malden.
Perry, Frank V., Jr., . . . . .	Provincetown.
Popkin, Jacob I., . . . . .	Malden.
Smith, John E., . . . . .	Stoneham.
Strout, Alden L., . . . . .	Boston.
Woods, Wilbur W., . . . . .	Provincetown.
Wright, Laurence A., . . . . .	Falmouth.

*Class to Graduate, October, 1918.*

Abbott, Raymond P., . . . . .	Newburyport.
Anderson, Alexander G., . . . . .	Dorchester.
Baker, Elmer N., . . . . .	Nantucket.
Caswell, Leonard N., . . . . .	Fall River.
Colson, Stuart R., . . . . .	Whitman.
Damon, Harold S., . . . . .	Plymouth.
Distelman, Max, . . . . .	Newburyport.
Easton, Francis J., . . . . .	Randolph.
Ford, Edward J., . . . . .	Wakefield.
Fraser, James E., . . . . .	Boston.
Gibbs, Arthur B., . . . . .	Nantucket.
Glines, Edgar G., . . . . .	Beverly.
Heaney, James R., . . . . .	Lynn.





CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1916, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Withdrawn, dismissed, dropped.	Number connected with the School.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.		
1893, . . . . .	138	-	138	-	-	-	29	-	29	24	138
1894, . . . . .	42	21	63	-	-	-	25	17	42	18	156
1895, . . . . .	33	38	71	19	19	38	6	6	12	6	156
1896, . . . . .	35	39	74	20	17	37	16	15	31	17	174
1897, . . . . .	32	41	73	15	21	36	10	10	20	9	165
1898, . . . . .	42	57	99	12	25	37	12	14	26	23	194
1899, . . . . .	34	45	79	11	12	23	24	17	41	11	184
1900, . . . . .	28	50	78	14	36	50	9	12	21	14	186
1901, . . . . .	31	37	71	11	18	29	8	12	20	16	172
1902, . . . . .	32	58	90	16	22	38	16	18	34	13	197
1903, . . . . .	34	32	66	17	14	31	10	15	25	17	178
1904, . . . . .	-	-	60	16	29	45	5	12	17	31	165
1905, . . . . .	-	-	65	10	10	20	-	-	9	13	137
1906, . . . . .	-	-	50	16	19	35	-	-	18	10	145
1907, . . . . .	-	-	60	10	16	26	-	-	17	26	133
1908, . . . . .	-	-	45	8	9	17	-	-	9	7	110
1909, . . . . .	-	-	81	14	22	36	-	-	16	16	156
1910, . . . . .	-	-	54	6	15	21	-	-	15	15	151
1911, . . . . .	-	-	69	20	23	43	-	-	18	18	168
1912, . . . . .	-	-	57	17	16	33	-	-	15	15	157
1913, . . . . .	-	-	79	21	19	40	-	-	20	8	174
1914, . . . . .	-	-	65	20	16	36	-	-	22	7	171
1915, . . . . .	-	-	70	26	19	45	-	-	18	11	176
1916, . . . . .	-	-	73	23	15	38	-	-	36	3	175
	-	-	1,730	350	411	761	-	-	512	359	-

<sup>1</sup> Beginning in 1904, the cadets upon entrance are unclassified until their second year.

## REGISTER OF GRADUATES.

Graduated.	NAME.	Residence.	Position.	Vessel.
1902	Osborne E. McKay, .	Provincetown, .	Pilot, . . .	Panama Canal.
1902	Arthur T. Luther, .	Swansea, . .	Pilot, . . .	Panama Canal.
1894	Henry G. Carpenter, <sup>1</sup> .	Roxbury, . .	Captain, . .	"Frances Alice."
1894	James E. Reardon, <sup>1</sup> .	Roxbury, . .	Captain, . .	"Moldegaard" (4,500 tons).
1895	George E. Eaton, . .	Wakefield, .	Captain, . .	"Anemone."
1895	Walter J. Healey, . .	Worcester, .	Captain, . .	"Bayway" (5,083 tons).
1896	Henry R. Bodge, . .	Wollaston, .	Captain, . .	"Northland" (3,282 tons).
1896	Wm. N. P. Baker, . .	Dorchester, .	Captain, . .	"Mariana" (3,063 tons).
1896	George R. Lauriat, . .	Medford, . .	Captain, . .	"Pickering."
1897	Mina Dailey, . . .	Rockport, .	Captain, . .	- -
1897	Frederick A. Sparks, .	Provincetown, .	Captain, . .	"Machigonne."
1897	Willis Howes, . . .	So. Yarmouth, .	Captain, . .	"El Aguileu."
1897	Emery Rice, . . .	Brighton, . .	Captain, . .	"Mongolia" (13,658 tons).
1898	Louis E. Congdon, . .	Boston, . . .	Captain, . .	"Nueces" (3,367 tons).
1898	Carl E. A. Anderson, .	Roslindale, .	Captain, . .	"Honolulan" (7,059 tons).
1899	Richard T. Blackford, .	Marblehead, .	Captain, . .	"Jessie Costa."
1899	Edward G. Smith, . .	Boston, . . .	Captain, . .	"Francis Hanify" (2,588 tons).
1900	William B. Knight, . .	Hull, . . .	Captain, . .	"Norwood."
1900	James S. Howes, . . .	Woods Hole, .	Captain, . .	"Juniata."
1901	Theodore H. Bicknell, .	Melrose, . . .	Captain, . .	"Hewitt" (5,334 tons).
1902	Fred C. Seibert, . . .	Greenfield, .	Captain, . .	"Solace" (5,700 tons).
1903	Harry M. Bostwick, . .	Northbridge, .	Captain, . .	"Abarenda" (6,705 tons).
1903	Nicholas J. Kane, . . .	Whitman, . .	Captain, . .	"Panaman" (6,649 tons).
1903	Robert B. Powers, . .	Brockton, . .	Captain, . .	"Ajax" (9,250 tons).
1904	John F. Williamson, . .	Brockton, . .	Captain, . .	"Myrtle."
1907	Frederic A. Gainard, . .	Chelsea, . . .	Captain, . .	"Wm. O'Brien" (5,483 tons).
1908	Eugene P. Shevlin, . .	East Boston, .	Captain, . .	"Gardenia."
1908	Edw. S. Ells, Jr., . .	Cambridge, .	Captain, . .	"Vulcan" (11,200 tons).
1895	Geo. L. P. Covell, . . .	Roxbury, . .	First officer, .	Inter-Island Steamship Company.
1897	Chas. W. Clift, . . .	Whitman, . .	First officer, .	"Gen. E. O. C. Ord."
1898	Eldon G. Freeman, . .	Whitman, . .	First officer, .	"Sequoia."
1899	Walter S. Lynch, . . .	Chelsea, . . .	First officer, .	"Kroonland."
1900	Alfred M. Cummings, .	Worcester, . .	First officer, .	"Edith."
1900	E. Newton Parker, . .	Greenfield, .	First officer, .	"Nero."
1901	Robert W. Tucker, . .	Kendal Green, .	First officer, .	"Kansan."
1901	John J. Coholan, . . .	South Boston, .	First officer, .	"Jonancy."
1901	Chas. D. Harrington, .	Cambridge, .	First officer, .	"Mascotte."

<sup>1</sup> Transferred.

REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1902	William I. O'Reilly, .	South Boston, .	First officer, .	"Queen."
1902	Arthur Jensen, .	Provincetown, .	First officer, .	"Nanshan."
1902	Edwin J. Madden, .	Everett, .	First officer, .	"St. Louis."
1903	Harold S. Rideout, .	Concord, .	First officer, .	"Comus."
1904	Andrew J. Iverson, .	Beverly, .	First officer, .	Boston and Virginia Transport Com- pany.
1904	Edward C. Roberts, .	North Beverly, .	First officer, .	"Panama."
1905	Fred'k S. Walker, .	Dorchester, .	First officer, .	"Malden."
1905	James A. Crocker, .	Nahant, .	First officer, .	"Hewitt."
1905	Harry W. Maynard, .	Winthrop, .	First officer, .	"Sumac."
1906	William H. Lee, .	Roxbury, .	First officer, .	"Kanawha."
1907	William M. Gifford, .	Woods Hole, .	First officer, .	Naval Auxiliary Service.
1907	Harry L. Chick, .	Beverly, .	First officer, .	"Saturn."
1908	Ernest F. Robinson, .	East Boston, .	First officer, .	"Sterling."
1909	Carroll E. Higgins, .	Somerville, .	First officer, .	American-Hawaiian Line.
1909	Robert S. Sparrow, .	Eastham, .	First officer, .	"Columbian."
1910	Chester R. Morris, .	Springfield, .	First officer, .	"Myrtle."
1911	William M. Gorham, .	Winthrop, .	First officer, .	"Muskogee."
1912	Robert M. Gray, .	Melrose, .	First officer, .	"Wm. A. McKen- ney."
1912	Ellenwood Folger, .	Siasconset, .	First officer, .	"Glenpool."
1894	Albert L. Warner, <sup>1</sup> .	Wollaston, .	Second officer, .	"Geo. E. Hawley."
1897	Edwin F. Darling, .	West Dennis, .	Second officer, .	"Jonancy."
1900	Joseph E. Gately, .	Marlborough, .	Second officer, .	"Princess Ann."
1902	Louis G. Ruggles, .	Neponset, .	Second officer, .	"Vulcan."
1903	Mark Woodbury, .	Townsend, .	Second officer, .	"Iowan."
1903	Benj. O'Connell, .	Peabody, .	Second officer, .	"Philadelphia."
1904	Leslie F. Holmes, .	East Whitman, .	Second officer, .	"Antilles."
1905	Harold H. Gridley, .	Dorchester, .	Second officer, .	"Muskogee."
1906	William A. Manchester, .	Brockton, .	Second officer, .	"Nereus."
1907	Walter L. Smith, .	Ashburnham, .	Second officer, .	"Aborean."
1907	Frazier L. Sears, .	East Dennis, .	Second officer, .	Standard Oil Com- pany.
1909	William A. Sillars, .	Danvers, .	Second officer, .	"Malden."
1909	Harold C. Cooper, .	Worcester, .	Second officer, .	Standard Oil Com- pany.
1910	Franklin K. Tyler, .	Beachmont, .	Second officer, .	"Westoil."
1911	Henry O. K. Hanson, .	Neponset, .	Second officer, .	"Brandon."
1911	Fred'k J. Shaw, .	Cambridge, .	Second officer, .	"Cyclops."
1911	Eugene W. Miller, .	East Saugus, .	Second officer, .	"Minnesota."
1911	Norris T. Ela, .	East Douglas, .	Second officer, .	"Medina."

<sup>1</sup> Transferred.

REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1911	Chas. F. Fornason, . .	Gloucester, .	Second officer, .	"Pultonia."
1911	Harold S. Dexter, . . .	Mattapoisett, .	Second officer, .	"Cæsar."
1911	Raymond C. Vose, . .	Cambridge, .	Second officer, .	"Nereus."
1911	Charles C. Plummer, .	Cambridge, .	Second officer, .	"Harvey H. Brown."
1912	Herbert A. Burns, . .	New Bedford, .	Second officer, .	"Glenpool."
1912	Ralph E. Merithew, .	Haverhill, .	Second officer, .	"Massapequa."
1912	Harold Ertel, . . .	Longmeadow, .	Second officer, .	"Carolyn."
1912	John W. Thompson, .	Marion, . .	Second officer, .	"Anemone."
1913	Waldon A. McIntire, .	Gloucester, .	Second officer, .	"Santiago."
1913	Arthur G. Burt, . . .	Whitman, .	Second officer, .	"Brazos."
1913	James A. MacCabe, .	Osterville, .	Second officer, .	- -
1913	Frank H. Nelson, . .	Fall River, .	Second officer, .	"Isthmian."
1906	Geo. C. Bosson, . . .	Reading, .	Third officer, .	"Newton."
1907	Elmer B. Small, . . .	North Truro, .	Third officer, .	"Sunlite."
1908	Chester B. Mellen, .	Quincy, . .	Third officer, .	"Hampden."
1909	Eric E. Winkvist, . .	Jamaica Plain, .	Third officer, .	"Kanawha."
1911	Wesley F. Besse, . .	South Hanson, .	Third officer, .	Standard Oil Com- pany.
1912	Wm. H. O'Donoghue, .	Roxbury, .	Third officer, .	"Arethusa."
1912	Clarence L. Howard, .	Auburndale, .	Third officer, .	- -
1912	Alex. G. Perkins, . .	Newburyport, .	Third officer, .	"Achilles."
1912	Jos. M. Daniel, . . .	Osterville, .	Third officer, .	"Kentuckian."
1913	John A. Maddock, . .	Newburyport, .	Third officer, .	"Hector."
1913	Gregory B. Nichols, .	Danvers, . .	Third officer, .	"Limon."
1913	Philip H. Waldron, . .	Westborough, .	Third officer, .	"L. V. Stoddard."
1913	Philip J. Fanning, . .	Needham, .	Third officer, .	"Maracaibo."
1913	Wilfred Senior, . . .	Boston, . .	Third officer, .	"Ohioan."
1913	Borden A. Tuell, . . .	New Bedford, .	Third officer, .	"City of Atlanta."
1913	Nelson T. Nutter, . .	Newburyport, .	Third officer, .	"Vulcan."
1913	Everett O. Swinson, .	East Gloucester, .	Third officer, .	"Alliance."
1914	Ten Eyck H. Reed, . .	South Framing- ham.	Third officer, .	"Muskogee."
1914	Samuel J. Lee, . . .	Roxbury, . .	Third officer, .	"Cæsar."
1914	Joseph L. Turner, . .	Amherst, . .	Third officer, .	"Dakotan."
1914	F. Palmer Harrington, .	Malden, . .	Third officer, .	"Kansan."
1914	Samuel A. Gates, . .	Malden, . .	Third officer, .	"Panaman."
1914	Gerard R. Crosby, . .	Orleans, . .	Third officer, .	"Minnesotan."
1914	Edward D. Newell, . .	Gloucester, .	Third officer, .	"Lexington."
1914	James A. Stowell, . .	Walpole, . .	Third officer, .	"San Juan."

REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1915	Curtis C. Fales, . .	Westborough, .	Third officer, .	"Brutus."
1915	William J. Bonner, . .	Dorchester, .	Third officer, .	"Kanawha."
1915	Ralph S. Moore, . .	Newton, . .	Third officer, .	"Montanan."
1915	Chas. H. Hurley, . .	Westminster, .	Third officer, .	"Oregonian."
1915	Earle D. Hammond, .	Mattapoisett, .	Third officer, .	- -
1915	Charles N. Bamforth, .	South Lincoln, .	Third officer, .	- -
1902	A. Russell Cushing, .	Dorchester, .	Navigating officer,	"Ranger."
1911	Albert L. Ware, . .	Cambridge, .	Watch officer, .	"Ranger."
1898	Joseph E. Sheedy, . .	Reading, . .	General superintendent.	Inter-Island Steam Navigation Company.
1906	Howard G. Copeland, .	Malden, . .	Superintendent, .	Massachusetts Naval Cadet School.
1906	Ernest J. Flanigan, . .	Wakefield, .	Instructor, . .	Massachusetts Naval Cadet School.
1898	George F. Waite, . .	Winthrop, .	Chief inspector of steamboats.	Providence, R. I.
1896	Alvin W. Haynes, . .	Somerville, .	Assistant inspector of hulls.	New York, N. Y.
1902	Herman T. Parker, . .	Rockport, .	Assistant inspector of hulls.	Boston, Mass.
1899	Frank B. Davis, . .	Dorchester, .	Assistant inspector of boilers.	New Orleans, La.
1898	Clarence E. Wood, . .	Fall River, .	Lieutenant, .	U. S. Navy.
1907	Thomas Baxter, . .	South Dennis, .	Lieutenant, .	U. S. Navy.
1895	Philip W. Lauriat, . .	Medford, . .	1st Lieut., U. S. C. G. S.	Purchasing officer, San Francisco, Cal.
1899	James A. Alger, . .	Reading, . .	1st Lieut., U. S. C. G. S.	"Pamlico."
1900	John F. McGourty, . .	Worcester, .	2d Lieut., U. S. C. G. S.	"Tampa."
1906	William F. Towle, . .	Boston, . .	2d Lieut., U. S. C. G. S.	"Androscoggin."
1896	Charles S. Young, . .	Boston, . .	Nautical expert, .	Navy Department.
1897	Fred'k W. Jones, . .	Winchester, .	Nautical expert, .	Navy Department.
1900	Gershom Bradford, .	Duxbury, .	Nautical expert, .	Navy Department.
1903	Leander A. Clapp, . .	Brockton, .	1st Lieutenant, .	U. S. Marine Corps.
1906	Clarence E. Nutting, .	Cambridge, .	1st Lieutenant, .	U. S. Marine Corps.
1894	Horace W. Folger, <sup>1</sup> .	Wilmington, .	Pilot, . .	Boston Pilot Boat Service.
1900	I. Clarence Bailey, . .	Kingston, .	Pilot, . .	Boston Pilot Boat Service.
1914	John L. Kirchner, . .	Hinsdale, .	Pilot, . .	"Mohawk."
1896	James H. B. Meehan, .	Lowell, . .	Chief engineer, .	"Proteus" (19,000 tons).
1897	Augustus T. Holmes, .	Ipswich, . .	Chief engineer, .	"J. M. Guffey" (2,520 tons).
1897	Edward J. Cogan, . .	Lynn, . .	Chief engineer, .	- -
1898	Charles E. Rowe, . .	Lynn, . .	Chief engineer, .	- -
1898	John C. Ganser, . .	Jamaica Plain, .	Chief engineer, .	"Caribbean" (2,800 tons).
1898	Everett S. Ransom, .	Mattapoisett, .	Chief engineer, .	"Parthenia."
1898	William E. Ballsdon, .	Neponset, .	Chief engineer, .	"Herman Winter."

<sup>1</sup> Transferred.



REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1898	Wilbur S. Lamont, . .	Leominster, .	Chief engineer, .	Panama Canal.
1899	Forest D. Clark, . .	Dorchester, .	Chief engineer, .	"Harvard" (3,737 tons).
1900	Hollis M. Cornwall, .	Melrose, . .	Chief engineer, .	"Persian" (2,677 tons).
1900	William Glover, . .	Wilmington, .	Chief engineer, .	"J. H. Devereaux" (1,618 tons).
1900	Norris R. Sibley, . .	Worcester, .	Chief engineer, .	"Col. Wikoff."
1900	Charles E. Lowe, . .	Roxbury, . .	Chief engineer, .	"Cacique" (6,202 tons).
1900	Elmer P. Butterworth, .	Foxborough, .	Chief engineer, .	"Gulflight" (5,188 tons).
1901	Robert A. Patterson, .	Brighton, . .	Chief engineer, .	"S o l a c e" (5,700 tons).
1901	David W. Warren, . .	Everett, . .	Chief engineer, .	"Currier" (4,711 tons).
1901	Eugene I. K. Murphy, .	Worcester, .	Chief engineer, .	Government vessel, Panama Canal.
1902	Daniel F. Butler, . .	North Easton, .	Chief engineer, .	"Gloria."
1903	James S. McGarry, . .	Shrewsbury, .	Chief engineer, .	"El Paso" (3,531 tons).
1903	Edward A. Mercer, . .	Cambridge, .	Chief engineer, .	"Hector" (11,250 tons).
1904	Cecil L. McIntyre, . .	Upton, . . .	Chief engineer, .	- -
1905	Walter C. Lockhart, .	Wakefield, .	Chief engineer, .	- -
1906	Augustus C. Caldwell, .	Dorchester, .	Chief engineer, .	"Ajax" (9,250 tons).
1909	Samuel J. Miller, . .	Fall River, .	Chief engineer, .	"Brutus" (6,600 tons).
1910	Geo. W. Sibley, . . .	Worcester, .	Chief engineer, .	"Transportation" (4,015 tons).
1895	Michael D. Sullivan, .	Boston, . .	First engineer, .	"Enterprise."
1896	Forrest H. McIntyre, .	Gloucester, .	First engineer, .	"Daniel Millard."
1898	Frank P. Killion, . .	Malden, . .	First engineer, .	"Kanai."
1900	James F. Rawdon, . .	Worcester, .	First engineer, .	"Tuscan."
1901	Frank A. Browne, . .	Westborough, .	First engineer, .	Isthmian Canal Commission.
1904	Charles W. Bumpus, .	Wakefield, .	First engineer, .	"Cape Ann."
1904	Edw. J. Chadbourne, .	Reading, . .	First engineer, .	"Henry F. Dimock."
1905	Fred G. Carlton, . .	Maynard, . .	First engineer, .	"Onondaga."
1905	Charles F. Tarr, . . .	Taunton, . .	First engineer, .	"Cyclops."
1906	Bradford N. A. Gladding,	New Bedford, .	First engineer, .	"Cyclops."
1906	Arthur G. Burbank, . .	Carver, . . .	First engineer, .	"Hector."
1907	Fred'k M. Coughlin, .	North Dartmouth, .	First engineer, .	Army tug, Newport.
1907	George H. Stickney, .	Worcester, .	First engineer, .	"Nanshan."
1907	Archie E. Bragg, . .	New Bedford, .	First engineer, .	"Saturn."
1908	Thos. B. Pellett, . .	Worcester, .	First engineer, .	"Orion."
1911	Robt. F. Phinney, . .	Roslindale, .	First engineer, .	"Cushing."
1895	Fred'k H. Stackpole, .	Hyde Park, .	Second engineer, .	"City of Brockton."
1896	John O. Sargent, . .	Worcester, .	Second engineer, .	"St. Louis."
1898	Arthur P. Stevens, . .	Nantucket, .	Second engineer, .	"Ponce."



REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1900	Ressie E. Bowser, . .	North Abington.	Second engineer, .	"Nero."
1900	Earle P. Marshall, . .	North Easton, .	Second engineer, .	"Uruguay."
1901	Sydney A. Maglathlin, .	West Bridge-water.	Second engineer, .	"Arethusa."
1902	Augustus W. Hart, . .	North Truro, .	Second engineer, .	"Chippewa."
1902	Ernest L. Saunders, .	Brockton, .	Second engineer, .	"Justin."
1905	Thomas W. Chisholm, .	North Billerica,	Second engineer, .	- -
1906	Victor M. Foster, . .	East Boston, .	Second engineer, .	"Newton."
1906	John C. Sheedy, . .	Malden, . .	Second engineer, .	New York-Honolulu.
1907	Philip B. Marey, . .	Boston, . .	Second engineer, .	"Oklahoma."
1907	Jos. R. Wier, . . .	Saundersville, .	Second engineer, .	"Nero."
1908	George H. Cameron, .	Wakefield, .	Second engineer, .	"Keyvive."
1909	Everett B. Ward, . .	Lynn, . .	Second engineer, .	"Saturn."
1909	William E. Caddigan, .	Dorchester, .	Second engineer, .	"Lewis K. Thurlow."
1909	Ervin L. Kelley, . .	Medford, . .	Second engineer, .	"Azalea."
1910	Leslie S. Badger, . .	Dorchester, .	Second engineer, .	"Seaconnet."
1910	Wm. M. Bowen, . .	Boston, . .	Second engineer, .	"Bunker Hill."
1910	R. Wilbur Anderson, .	Mattapan, .	Second engineer, .	"Massachusetts."
1911	Geo. L. Lockhart, . .	Wakefield, .	Second engineer, .	"Hector."
1911	Samuel D. White, . .	Hyannisport, .	Second engineer, .	"Bunker Hill."
1912	Richard K. O'Connell, .	North Easton, .	Second engineer, .	"Currier."
1912	Louis H. Racicot, . .	Lowell, . .	Second engineer, .	"Jason."
1912	Wm. A. Hamilton, . .	Cliftondale, .	Second engineer, .	"Cyclops."
1913	Earle A. Lewis, . .	Woods Hole, .	Second engineer, .	Munson Line.
1903	Rudolph Komenda, .	Somerville, .	Third engineer, .	"Hannibal."
1909	Fritz T. Kebler, . .	Rochdale, .	Third engineer, .	"Onondaga."
1910	Ernest B. Wyatt, . .	Wakefield, .	Third engineer, .	"Vulcan."
1912	Albert W. Culley, . .	Fitchburg, .	Third engineer, .	"Vulcan."
1912	Geo. R. Davison, . .	Springfield, .	Third engineer, .	"Advance."
1912	Walter L. Brewster, .	Somerville, .	Third engineer, .	"F. J. Lisman."
1913	Nils J. Peterson, . .	Brockton, .	Third engineer, .	"Proteus."
1913	Russell A. McLay, . .	Lawrence, .	Third engineer, .	- -
1914	Leslie T. Severance, .	Cambridge, .	Third engineer, .	"Arlington."
1915	Bernhardt Gerecke, .	Boston, . .	Third engineer, .	"Altamaha."
1914	Arthur F. Goodwin, .	Cambridge, .	Fourth engineer, .	"Tennyson."
1897	Lorenzo C. Farwell, .	Dorchester, .	1st Lieut., Eng., U. S. C. G. S.	"Gresham."
1896	Webb C. Maglathlin, .	Bridgewater, .	2d Lieut., Eng., U. S. C. G. S.	"Arcata."
1897	Albert F. Patterson, .	Townsend, .	2d Lieut., Eng., U. S. C. G. S.	"Yamacraw."

REGISTER OF GRADUATES — *Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1898	John T. Carr, . . .	Malden, . . .	2d Lieut., Eng., U. S. C. G. S.	"Penrose."
1906	Henry C. Roach, . . .	New Bedford, . .	2d Lieut., Eng., U. S. C. G. S.	"Androscoggin."
1907	Paul R. Smith, . . .	Concord, . . .	3d Lieut., Eng., U. S. C. G. S.	"Seminole."
1895	Charles H. Lincoln, .	Gloucester, . .	Marine surveyor,	Cleveland, Ohio.
1898	Herbert E. Fish, . .	Mattapoisett, . .	Chief machinist, .	U. S. Navy.
1896	H. E. Kershaw, . . .	Lawrence, . . .	Machinist, . . .	U. S. Navy.
1903	C. Allan Holbrook, .	Marlborough, . .	Machinist, . . .	"Oregon."
1902	John F. Murphy, . .	Worcester, . . .	Gunner, . . .	"Delaware."
1900	Hugh H. McDonagh, .	Worcester, . . .	Electrician, . . .	"Cæsar."
1903	Fred S. Garland, . .	Randolph, . . .	Electrician, . . .	"Alabama."
1903	Guy H. Hudson, . . .	Somerville, . . .	Electrician, . . .	"Alabama."
1904	Charles A. Hill, . . .	Melrose, . . .	Electrician, . . .	"Bay State."
1904	C. George Dyson, . .	Billerica, . . .	Electrician, . . .	"Delaware."
1905	Lawrence G. Kelley, .	Taunton, . . .	Electrician, . . .	"Illinois."
1905	John F. Kinnaly, . .	South Boston, . .	Electrician, . . .	"Vermont."
1906	Carroll L. Morgan, . .	Beverly, . . .	Navy wireless electrician.	San Juan, P. R.
1906	Louis H. Houghton, .	Worcester, . . .	Electrician, . . .	"Missouri."
1906	William R. Dolan, . .	Worcester, . . .	Chief electrician, .	"Patterson."
1907	Eugene E. Chaney, . .	Arlington, . . .	Electrician, . . .	"North Dakota."
1907	Louis L. LaMontagne, .	Millers Falls, . .	Electrician, . . .	"Pilgrim."
1910	Howell S. Loundes, . .	Worcester, . . .	Electrician, . . .	"Georgia."
1911	Harvey M. Thorndike, .	Swampscott, . . .	Electrician, . . .	"Nereus."
1911	Patrick S. Coakley, . .	Malden, . . .	Electrician, . . .	Submarine "C-2."
1911	Walter P. Lynn, . . .	Beverly, . . .	Electrician, . . .	"Birmingham."

## APPROPRIATIONS.

The appropriations for the school for the fiscal year 1916, from Dec. 1, 1915, to Nov. 30, 1916, are here accounted for as follows:—

*Current Expenses.*

Appropriation,	.	.	.	.	.	.	.	.	.	\$62,000 00
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## Expended:—

Pay roll,	.	.	.	.	.	.	.	.	\$31,725 23
Provisions,	.	.	.	.	.	.	.	.	17,455 70
Seamanship department,	.	.	.	.	.	.	.	.	1,684 63
Engineering department,	.	.	.	.	.	.	.	.	7,238 85
Instruction,	.	.	.	.	.	.	.	.	953 37
Miscellaneous,	.	.	.	.	.	.	.	.	2,937 36

Total amount expended,	.	.	.	.	.	.	.	.	61,995 14
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Balance unexpended,	.	.	.	.	.	.	.	.	\$4 86
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*Office Expenses.*

Appropriation,	.	.	.	.	.	.	.	.	.	\$6,000 00
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## Expended:—

Salaries,	.	.	.	.	.	.	.	.	\$3,199 00
Rent of office and janitor's service,	.	.	.	.	.	.	.	.	1,115 00
Advertising,	.	.	.	.	.	.	.	.	343 50
Printing,	.	.	.	.	.	.	.	.	502 11
Stationery and postage,	.	.	.	.	.	.	.	.	339 72
Telephone and telegrams,	.	.	.	.	.	.	.	.	152 62
Commissioners' expenses,	.	.	.	.	.	.	.	.	98 18
Miscellaneous,	.	.	.	.	.	.	.	.	256 23

Total amount expended,	.	.	.	.	.	.	.	.	\$6,006 36
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Less amount allowed by Retirement Asso-

ciation,	.	.	.	.	.	.	.	.	9 58
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5,996 78
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Balance unexpended,	.	.	.	.	.	.	.	.	\$3 22
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Respectfully submitted,

FRANCIS T. BOWLES, *Chairman.*

WILLIAM E. McKAY.

CLARENCE E. PERKINS.

## FEDERAL AND STATE LEGISLATION.

## AUTHORITY OF THE UNITED STATES.

H. R. 24145. APPROVED MARCH 4, 1911.

(Original Act passed June 20, 1874.)

AN ACT FOR THE ESTABLISHMENT OF MARINE SCHOOLS, AND FOR  
OTHER PURPOSES.

That the Secretary of the Navy, to promote nautical education, is hereby authorized and empowered to furnish, upon the application in writing of the governor of a State, a suitable vessel of the navy, with all her apparel, charts, books, and instruments of navigation, provided the same can be spared without detriment to the naval service, to be used for the benefit of any nautical school, or school or college having a nautical branch, established at each of the following ports of the United States: Boston, Philadelphia, New York, Seattle, San Francisco, Baltimore, Detroit, Saginaw (Michigan), Norfolk, and Corpus Christi, upon the condition that there shall be maintained at such port a school or branch of a school for the instruction of youths in navigation, steamship-marine engineering, and all matters pertaining to the proper construction, equipment, and sailing of vessels or any particular branch thereof.

SECTION 2. That a sum not exceeding the amount annually appropriated by any State or municipality for the purpose of maintaining such a marine school or schools or the nautical branch thereof is hereby authorized to be appropriated for the purpose of aiding in the maintenance and support of such school or schools: *provided, however*, that appropriations shall be made for one school in any port heretofore named in section one and that the appropriation for any one year shall not exceed twenty-five thousand dollars for any one school.

SECTION 3. That the President of the United States is hereby authorized, when in his opinion the same can be done without detriment to the public service, to detail proper officers of the navy as superintendents of or instructors in such schools: *provided*, that if any such school shall be discontinued, or the good

of the naval service shall require, such vessel shall be immediately restored to the Secretary of the Navy and the officers so detailed recalled: *and provided further*, that no person shall be sentenced to or received at such schools as a punishment or commutation of punishment for crime.

SECTION 4. That all laws and parts of laws in conflict herewith are hereby repealed.

## AUTHORITY OF THE STATE OF MASSACHUSETTS.

CHAPTER 45, REVISED LAWS, AS AMENDED BY CHAPTER 171, ACTS OF 1903, AND CHAPTER 224, ACTS OF 1913.

### THE NAUTICAL SCHOOL.

SECTION 1. There shall be a board of commissioners of the Massachusetts nautical school consisting of three citizens of the commonwealth, one of whom shall annually, before the first day of July, be appointed by the governor, with the advice and consent of the council, for a term of three years from said first day of July.

SECTION 2. Said commissioners shall serve without compensation, but they shall be reimbursed by the commonwealth for all expenses actually incurred by them in the performance of their official duties.

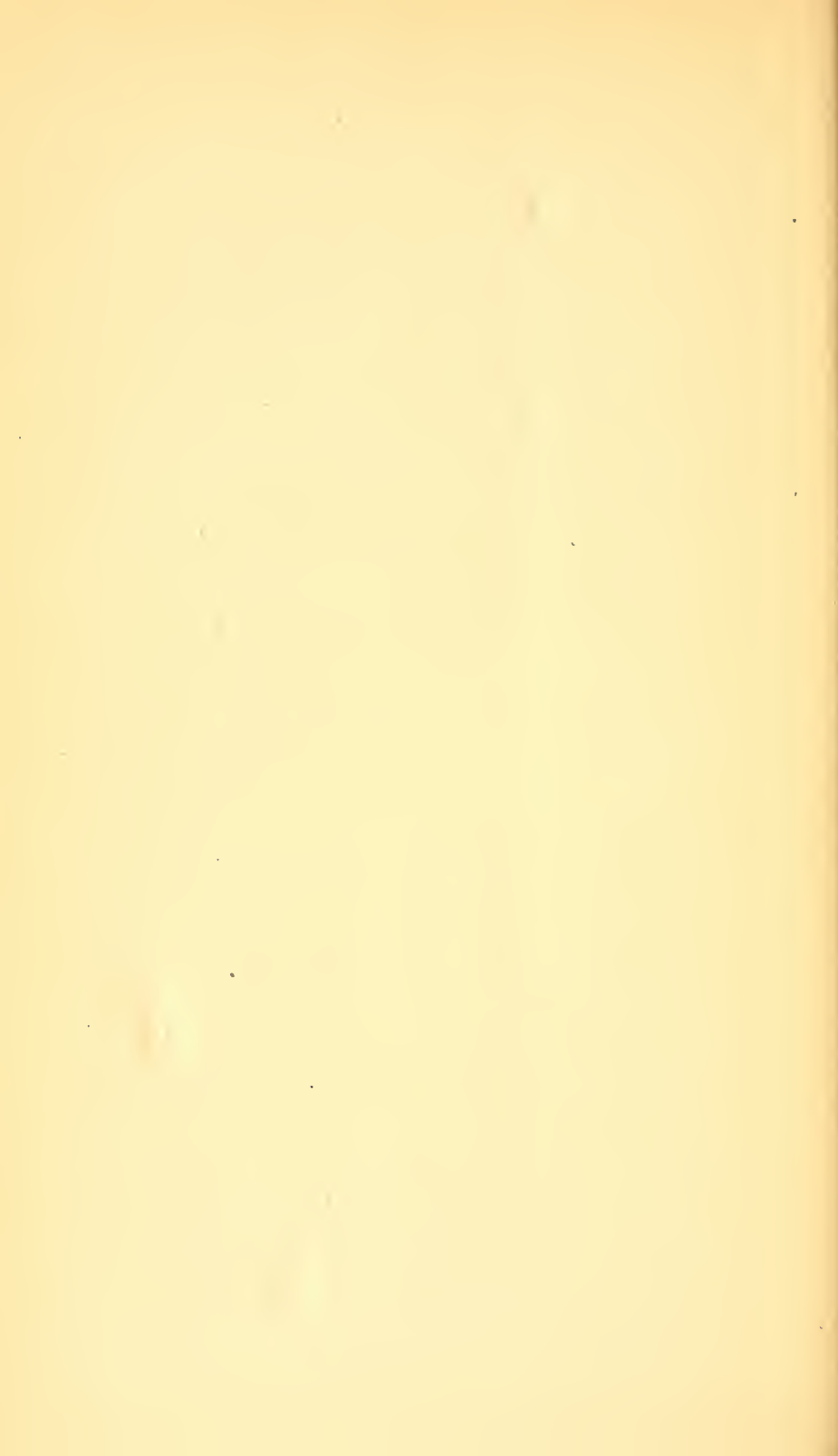
SECTION 3. They shall provide and maintain a nautical school for the instruction and training of pupils in the science and practice of navigation, shall provide accommodations for the school on board a proper vessel, purchase and provide books, stationery, apparatus and supplies needed in the work of the school, appoint and remove instructors and other necessary employees, determine their number and compensation, fix the terms and conditions upon which pupils shall be received and instructed in the school and be discharged or dismissed therefrom, establish all regulations necessary for its proper management and shall from time to time provide for cruises in or from the harbor of Boston.

SECTION 4. They may receive from the United States government, and use for the accommodation of the school, such vessels as the secretary of the navy may detail.

SECTION 5. They may annually expend such sum as the general court may from year to year appropriate, which shall be paid by the commonwealth; and they shall annually submit an estimate of the expense required in making cruises in or from the

harbor of Boston, and the amount of said estimate, after approval by the governor and council and subject to the provisions of chapter six, shall be advanced to the commanding officer of the vessel detailed therefor, who shall give a bond in the sum of ten thousand dollars, with sureties approved by the governor and council, for its proper disbursement. Said advance shall not exceed ten thousand dollars for six months, and shall be accounted for by properly approved vouchers within thirty days after the termination of said cruises.

SECTION 6. They shall annually, in January, report to the general court a detailed statement of all moneys appropriated and expended during the preceding year for the nautical school, stating the results of the work during such year and making any necessary recommendations.





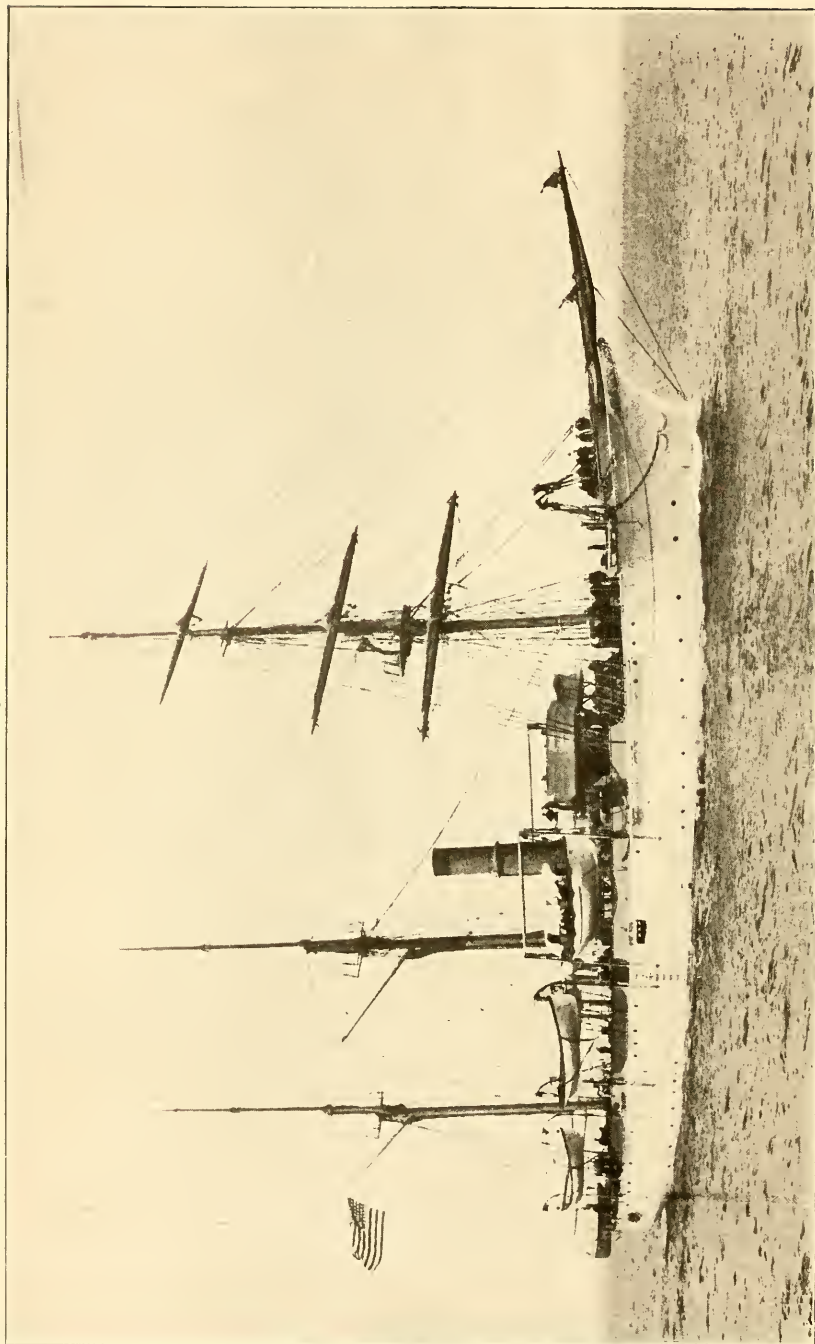












The Massachusetts Nautical Training Ship "Ranger" Leaving Boston Harbor on the Summer Cruise.

TWENTY-FIFTH ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

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JANUARY 1, 1917



BOSTON  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS  
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1917



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SUPERVISOR OF ADMINISTRATION.

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COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL

2A PARK STREET, BOSTON

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FRANCIS T. BOWLES, *Chairman*  
WILLIAM E. MCKAY  
CLARENCE E. PERKINS

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WILLIAM H. DIMICK, *Secretary*



# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The Commissioners have the honor to submit their report of the operations of the school for the year 1916, and respectfully recall to your notice that this completes the twenty-fifth year of the maintenance of this maritime school by the Commonwealth.

### THE PURPOSE OF THE NAUTICAL SCHOOL AND THE COURSE OF INSTRUCTION.

The course of instruction, given in detail later in this report, covers two years, and is intended to prepare young men for service as deck and engineer officers in the merchant marine. The instruction is carried out on board the U. S. S. "Ranger," a steam sloop-of-war, loaned to the Commonwealth by the United States Navy Department. The students are divided into four classes, one graduating each spring and fall; they are instructed by the officers of the ship, who also on the summer cruise, extending from May until October, perform the regular ship duties of their positions. During the winter months the "Ranger" is moored at the North End Park, in Boston, and the school continues on board the ship. Students are admitted by competitive examination in the spring and fall. The expense to those taking the course is limited to the cost of clothing, books, etc., amounting to \$85 the first year and \$25 the second year.

## THE SCHOOL RECORD.

During the year there have been 175 students on the rolls of the school, the sons of citizens of Massachusetts. They came from 74 cities and towns of the Commonwealth, and their previous education was as follows: high schools, 144; academies, 8; technical schools and business colleges, 4; grammar schools, 19. The average age of cadets at entrance was seventeen years. There have been graduated 38 cadets, 16 in the spring and 22 in the autumn. The number of cadets enrolled in the school at present is 100.

## THE FUTURE PROSPECT FOR GRADUATES.

The demand of the merchant marine for the services of the graduates is much greater than the supply. So far as our records show, about 75 per cent. of the 761 graduates of the school are serving in, or in connection with, the merchant marine. In recent years the proportion entering the merchant service has continued to increase.

Graduates of the school entering the merchant marine of the United States, under the present laws and regulations of the Department of Commerce, are eligible for a certificate as able seamen, and after one year's service at sea, having attained the age of nineteen years, are eligible for examination for a license as second officer or second assistant engineer. On arriving at the age of twenty-one years they are eligible for a license as master or chief engineer, provided the other conditions requisite are fulfilled.

The laws of the United States require that the watch officers of vessels registered for the foreign trade shall be citizens of the United States, except that under a recent provision of the law the President is authorized to temporarily suspend this provision in reference to foreign-built ships admitted to United States registry.

During the last two years the tonnage of vessels under the United States flag registered for the foreign trade has more than doubled, the increase for the first year having been largely made by the foreign vessels admitted to United States registry.



United States merchant vessels in the foreign trade on June 30, 1916, totaled 2,191,715 tons.

During the past year there has been unprecedented activity in the shipyards of the United States in the construction of vessels for the coastwise and foreign trade under the United States flag. This activity continues and shows every prospect of increasing, thereby creating a demand for officers for merchant vessels who are citizens of the United States.

On Nov. 1, 1916, according to the report of the Bureau of Navigation, Department of Commerce, steel merchant vessels were building or under contract to be built in private American shipyards to the number of 417, of 1,479,946 gross tons. This amount corresponds with that under construction in the shipyards of Great Britain during normal times of maximum activity.

#### NATIONAL AID.

The current naval appropriation act contains a provision authorizing the Secretary of the Navy to reimburse the Commonwealth for expenditures actually made for maintaining the nautical school to the extent of \$25,000 a year for the five years beginning in 1911. Upon request of the commissioners, the Auditor of the State has made application to the Navy Department for the authorized reimbursement to the amount of \$125,000.

It is expected that the Secretary of the Navy will continue to present to Congress an annual estimate of \$25,000 on account of the Massachusetts Nautical School, in accordance with the law of March 4, 1911.

#### THE COMMISSION.

In the death of Rear Admiral John F. Merry, U. S. N., retired, which occurred in Washington on May 29, 1916, the Commissioners suffered the loss of their chairman. The following minute was adopted:—

*Resolved*, That the Commissioners of the Massachusetts Nautical School express their sense of the loss which the Commonwealth has suffered in the death of Rear Admiral John F. Merry, U. S. N. (retired). He was the first superintendent of the Nautical School, and in three years

of this valuable service he laid the foundation, and established the initial success, of the school. During the past five years he has been chairman of the Board of Commissioners, a wise counsellor, bringing to the work the ripened judgment of a long and successful career in the merchant marine and in the United States Navy. Admiral Merry was endowed with a pleasant and attractive personality; he was unpretentious in manner, forceful, considerate, earnest, sincere, straightforward and seamanlike; his world-wide travel and varied experience gave him a broad outlook and large sympathies.

Respected and cherished, his name will always be associated with nautical education in Massachusetts as one of its most active workers and loyal supporters.

On July 5, 1916, Mr. Francis T. Bowles of Barnstable was appointed a Commissioner, and on July 7, 1916, was elected chairman.

On July 1, 1916, Mr. Clarence E. Perkins of Winthrop was reappointed Commissioner.

#### RECOMMENDATION.

The most desirable improvement of the Nautical School which is in the power of the State to provide would be a permanent berth for the schoolship on property of the Commonwealth in such location that a building would be available having study and exercise rooms.

The "Ranger" in recent years has been berthed at the North End Park in the winter time, and the spar deck being housed in gives space for the conduct of school exercises. It is difficult to conduct a school on board a small vessel on which must simultaneously proceed all the work of the maintenance, subsistence and lodging of the cadets, crew and officers. If the school had a permanent berth on property which it could police, excluding undesirable visitors and giving sufficient play and drill grounds for the cadets, and school and exercise rooms, the health of the school could be maintained with greater assurance and the instruction given with greater efficiency.

#### APPRECIATION.

The Commission desires to express its appreciation for the excellent performance of duty of the staff of the school, and also of that of the Commission's secretary.

### THE SUMMER TERM.

The summer term began on April 12, with a total enrolment of 104 cadets, including 32 new entries. The preliminary cruise was made to Provincetown, Yorktown, Va., Washington, D. C., Annapolis, Md., Norfolk, Va., and Hampton Roads, returning to Boston on May 18 for the annual inspection by His Excellency the Governor and Council, which was held on May 23 in Boston Harbor, and included various drills by the cadets both at anchor and under way, followed by an address by Governor McCall.

On May 27 the "Ranger" sailed from Boston for St. Thomas. After visiting Havana, Cuba, the ship returned to Norfolk. A call was made at Newport News before returning to the New England coast, where in suitable ports the cruise was completed.

### SUPERINTENDENT'S REPORT.

Following is the report of Capt. P. W. Hourigan, U. S. N., superintendent of the school: —

The cruise resolved itself in three phases, — first, the preliminary or "shake-down" cruise; second, the off-shore period; third, the coasting period, at the end.

The conditions in Europe rendered it inadvisable to cross the Atlantic, so the choice was restricted to our own waters and the nearer West Indies.

### THE PRELIMINARY CRUISE.

The ship sailed from Boston on April 18 and visited Provincetown, Yorktown, Va., Washington, D. C., Annapolis, Md., Norfolk, Va., and Hampton Roads, returning to Boston on May 18 for the Governor's inspection, which was held on May 23.

This month was most profitably spent. A mild climate suitable for the initial work was a special advantage. Stopping over night at Provincetown, the ship sailed for the York River, Va., anchoring off Yorktown; a stay of six days was made there, the time being occupied by detailed instruction in boats, sail drills and the emergency drills. Liberty was given, and the cadets had an opportunity to see the place, so full of historical reminders of the Revolutionary War. Washington was next visited, and through the courtesy of the commandant of the Navy Yard, Rear Admiral J. G. Glennon, U. S. N., the ship was berthed alongside the yard. The cadets were given every opportunity to inspect the gun shops.

Through the special efforts of Hon. James A. Gallivan and Hon. Ernest W. Roberts, Massachusetts Representatives in Congress, the officers and cadets were afforded a special meeting with the President of the United States at the White House, a most signal honor and one highly appreciated.

Annapolis was next visited, and the superintendent of the Naval Academy, Capt. E. W. Eberle, U. S. N., extended to the ship a berth alongside the academy close to the midshipmen's barracks. Captain Eberle showed the ship many marked courtesies, detailed midshipmen officers to show the cadets through the academy, and was in every way solicitous that our visit should be both profitable and pleasant.

In all this time, both in port and when under way, all the various preliminary exercises were carried on, modifying the regular routine, however, to suit the advantages offered in inspecting these government plants and in seeing the cities visited.

The ship proceeded from Annapolis to Norfolk, where coal was taken on board. The cadets inspected the Norfolk Navy Yard. Sunday was spent at Hampton Roads, and on May 14 the ship sailed for Boston, arriving on the 18th.

On May 23 the annual inspection was held by His Excellency, the Governor of the Commonwealth, accompanied by State officials and various invited guests. The cadets performed the various drills and exercises, both at anchor and under way, in a smart and seamanlike manner.

#### THE CRUISE TO THE WEST INDIES.

Following the preliminary cruise a short leave was given the cadets, and on May 27 the ship sailed for St. Thomas. San Juan, P. R., was scheduled as the first port to be visited, but owing to reported health conditions there it was decided to omit all Porto Rican ports. In making this passage the ship made well to the eastward in the hope that the trade winds would be picked up and part at least of the passage be made under sail alone. Only light easterly winds were met, however. A stay of three days was made in St. Thomas, when the ship sailed for Havana. The course was laid to the northward of Porto Rico and Haiti through the Bahama Passage. The winds were generally fair but light, and sail was made whenever it could be of assistance. Havana, as always, proved an interesting city to visit, but the heavy rains prevailing at that season interfered much with the routine. After a stay of four days the ship sailed for Hampton Roads. The usual track in the Gulf Stream through the Florida Straits was followed, affording the cadets the opportunity to note this interesting phenomenon (on one running day the distance made good was helped 104 miles by the set of the stream).

Coal was taken on at Norfolk and a stop made at Newport News, where the officials of the Newport News Shipbuilding Works courteously afforded the cadets an opportunity to inspect the plant.







## THE COASTING PERIOD OF THE CRUISE.

The ship sailed from Hampton Roads for Gardiner's Bay on June 24, and early in the morning of June 26 was fouled by a vessel which proved to be the British converted cruiser "Calgarian." The "Calgarian" was cruising (probably patrolling) without lights, and gave no warning of her presence until too late to avoid fouling; she crossed close under the "Ranger's" bows, and carried away all our head booms, — practically the only damage done us. I deemed it advisable to proceed to Boston at once, and on arrival there requested the commandant of the naval station to follow the usual course for vessels of the navy under circumstances of damage or collision. Accordingly, a naval board of investigation was convened, which fully exonerated the officers and crew of the "Ranger" from any blame or neglect.

The commandant of the Navy Yard, Capt. W. R. Rush, U. S. N., following his never-failing practice of doing everything possible for the ship's interest, saw to it that repairs were promptly made so that we resumed cruising on July 11. The remainder of the time up to our return to Boston, on September 13, was spent on the coast as shown in the itinerary.

While the cruise on the whole was satisfactory from an instructive point of view, it lacked the great advantages which can be had only in long periods of deep-water cruising, and which can be resumed, it is to be hoped, when the conditions in European waters will permit. In all our passages, off-shore deep-sea navigation was given every attention. Cruising along the coast had its advantages in that a very unusual opportunity was afforded for practice in piloting, and the constant use of charts and methods of "fixing." There was much fog, and this condition, too, afforded valuable exercise and experience.

The fouling with the "Calgarian" furnished an actual emergency at sea, calling for promptness in meeting a situation which had all the elements of actual danger. The cadets met the situation most creditably. All boats were provisioned and ready for lowering promptly and with no more confusion than if it were a drill. As a proof of this, both ships, following the usual practice of naval vessels, sent a boat to inquire for the other, offer assistance, etc. The "Ranger's" boat had shoved off on this mission several minutes before the "Calgarian's" boat came alongside of us, and it is to be presumed that the "Calgarian," cruising as she was, a belligerent vessel without lights, was prepared to an unusual degree for an emergency.

As the cadets had "all night in" during most of the cruise it was possible largely to utilize the afternoon "watch below" at instruction in school subjects. Classes were regularly held in arithmetic for the newly entered cadets, and English subjects for the senior ones. It is found by experience that the newly entered cadets, who have, in many cases, been some time out of school, just before entering need considerable reviewing in the elementary subjects to enable them to take up the subjects of this school with facility.



Cadets of the senior classes were given the most responsible duties, and with only the necessary supervision by the officers. They stood regular officer of the watch duty in port and at sea, with instructions that they were not to be interfered with unless to actually prevent accidents or wrong methods. They met the situation, on the whole, very creditably.

Whenever the ship was in port on Sunday an opportunity was given the cadets to attend church; when at sea, the commanding officer held a short service.

The health of all hands was in general very good, as shown by the medical officer's report. The physical development would have shown better results had the opportunity been present for more off-shore cruising.

The conduct of the cadets left but little to be desired. There were few offences against the discipline of the ship of any seriousness. Overstaying leave was practically unknown, as were any cases of misconduct ashore. It was most pleasing, in fact, to receive, as I did frequently, very favorable comments from people on shore as to the good appearance and behavior of cadets on liberty. I was particularly pleased to receive such comments from the superintendent of the Naval Academy and from the commandant of the Naval Training Station at Newport, both institutions of intensive training and high standards of requirements for young men.

In all foreign ports visited the naval practice of exchanging calls with civilian officials on shore was followed, as was that of exchanging visits with foreign and our own naval vessels when such were fallen in with. This is, I believe, an excellent object-lesson for the cadets, and helps maintain the dignity of the ship.

It was with deep regret that all on board received the news of the death of Rear Admiral J. F. Merry, U. S. N., the chairman of the Board of Commissioners. All were deeply sensible of his great interest in the school, his firm and kindly guidance, and the inspiration which his own career furnished to those entering on a seafaring life. As a mark of respect to his memory colors were displayed at half mast on the day following the receipt of the news of his death, and all but necessary ship's work was suspended.

The following outlines the instruction carried on under the various departments:—

#### SEAMANSHIP.

Upon the departure from Boston on the preliminary cruise, a very strenuous routine was begun.

For the first few days out instruction in all general drills was given, followed by the drills themselves.

Upon arrival at Yorktown, and during the stay there, sail drill and drill with boats under oars were held. The late afternoon was devoted to the ship's work, the ship being painted in this port.

While in Washington and Annapolis cadets were given only one drill each day, the remainder of the time being devoted to sightseeing, the

National Buildings, the White House, the Washington Navy Yard and gun factory and the Naval Academy being visited.

A short stay in Norfolk was devoted to an inspection of the Norfolk Navy Yard and to coaling ship.

When under way, and when weather conditions permitted, exercise at man overboard was held.

By the end of the preliminary cruise the ship was well shaken down, and cadets went through the emergency drills with the snap so essential to a smart ship.

At the beginning of the regular cruise, May 27, 1916, the routine was modified to give a study period for one watch in the afternoon, and an evening period for instruction in signals for the first and second classes. This was continued throughout the cruise.

During the time in the tropics no strenuous exercises were given, this period being devoted to instruction and light drills.

After the return north the cruise was interrupted by the collision with H. M. S. "Calgarian," but from this most valuable experience was obtained in unrigging and rerigging the ship.

In the harbors of Boothbay and Nantucket particular attention was given to small-boat exercises, both under oars and sail.

About the middle of the cruise the watch bill was shifted so that all cadets were familiarized with both square, and fore and aft sail.

Other exercises held for drill purposes or necessitated by circumstances were kedging with a 1,500 pound anchor, sending down and fishing top-sail yard, assisting windlass with deck tackles when weighing the anchor, overhauling ground tackle, abandoning ship with all hands, and small-arms practice.

On days when inclement weather prevented drills in the open, the first and second classes were given instruction in sail making and wire splicing, and the third and fourth classes were given knotting and splicing.

The afternoons were devoted to study and theoretical instruction for one watch and ship work for the other, the necessary overhauling and refitting of the ship being done in these periods.

#### NAVIGATION.

While at sea, out of sight of land, cadets of the first and second classes were required to take sights and work practical deep-sea navigation. This work included the finding of noon position by observation and dead reckoning, course and distance made good since preceding noon, set and drift of current, and the deviation of the compass by observation. Practice was given in taking observations of the stars, planets and moon, as well as the sun. Due to the comparatively short time at sea, the work in practical nautical astronomy was necessarily limited. Sufficient instruction and practice was given with the sextant, however, so that these classes will easily be able by their own efforts to perfect themselves in this branch of navigation. The complete course in theoretical navigation

given the first class during the winter term, and which the second class will receive this coming winter, combined with the practical work of the cruise, will give both classes an excellent groundwork in this subject.

As the greater part of our cruising was in sight of land, excellent opportunities were afforded to put into practice the various problems of piloting. Cadets were required to take and plot cross bearings, bow and beam bearings, and to perfect themselves in the use of charts, sailing directions, tide tables, etc. In this work great interest was shown. In connection with this kind of work I considered coasting by night and the entering and leaving ports during darkness to be valuable practical instruction. Much running was accomplished during thick weather, and the opportunity was given to impress upon the cadets the precaution necessary to take while running under these conditions, and to acquaint them with the use of both aerial and submarine fog signals.

While in port classes were held afternoons. Instruction and practical work was given in chronometer comparisons, care and winding of chronometers, time signals, use of three-armed protractor, artificial horizon, and a general review of the problems of navigation.

The patent sounding machine was used frequently, and practice was given with the coasting lead and hand leads.

The use of the radio apparatus to receive time signals for chronometer comparisons was emphasized.

The cadets of the third class received instruction in the use of the various instruments used in navigation, dead reckoning, keeping the log book, elements of piloting, rules of the road, systems of buoyage, aids to navigation, etc. This kind of work at sea is easily and effectively taught, as so many practical illustrations constantly present themselves to refresh the memory of the students and automatically impress upon their minds the essential points.

#### MEDICAL.

During the summer cruise twelve cadets have been on the sick list, — seven for one day only, three for two days, one for nine days' illness with tonsillitis, and one for eight days with a bronchial affection, making a total of thirty days.

Measurements and weights have been taken of all cadets, with the following results: at the beginning of the cruise the average height was 5 feet 7.22 inches, and the weight 134.13 pounds. At the end of the cruise these had increased to 5 feet 7.30 inches, and 136.44 pounds, respectively.

#### STEAM.

Senior cadets were instructed in the following: firing, oiling, operation of main and auxiliary machinery, overhaul and repairs to same in port and at sea; valve setting for main and variable expansion valves; pipe systems; log writing; coal consumption and checking same as received, stowed and expended; inspection, care and preservation of boilers, testing water in same for salt and acidity; taking indicator diagrams and

reading same for defective valve setting; finding mean pressure from diagram by ordinates and planimeter; working out horsepower of engines by simple rules and logarithms; problems on weight and lever, spring-loaded safety valves, boilers and staying of same, propellers; fuel consumption and speed; care and caution necessary in using steam and in starting and stopping engines; care and preservation of hull and fittings.

Junior cadets were instructed as follows: coal passing, firing, names and uses of firing tools and of boiler fittings.

#### ELECTRICITY.

First and second classes nautical cadets were given instruction and practice in the use of Continental Morse Code for night signaling, each cadet being required to know the code and able to send and receive by sight or sound.

First and second classes engineer cadets were given instruction and practice in the repairs and care of the ship's electrical plant. Under the supervision of the electrician each cadet was assigned full charge of the ship's electrical apparatus, being required to tend the starting, shifting load and stopping dynamos, and to make necessary repairs to dynamos, motors, lights, call bells and batteries. Parts of the lighting circuits were overhauled and conduit installed and renewed. Under careful supervision the cadets were required to do the work as far as practicable.

Cadets were selected for radio instruction during the winter term, passed the government examination and received radio licenses in March.

Members of the radio detail were assigned regular radio watch at sea, keeping a record of calls and communications heard. They assisted in the care and upkeep of the set, making repairs to antenna at sea, re-winding spark gap motor armature and other repairs as necessary.

#### CRUISES OF 1916.

The itinerary was as follows: —

##### *Preliminary Cruise.*

April 12, cadet officers, petty officers and fourth class reported on board; April 14, first, second and third classes reported on board.

Ports.	Distance (Miles).	Left.	Arrived.
Boston-Provincetown, . . . . .	50	Apr. 18	Apr. 18
Provincetown-Yorktown, Va., . . . . .	480	Apr. 19	Apr. 21
Yorktown-Washington, D. C., . . . . .	152	Apr. 27	Apr. 28
Washington-Annapolis, Md., . . . . .	160	May 4	May 5
Annapolis-Norfolk, Va., . . . . .	150	May 9	May 10
Norfolk-Fortress Monroe, Va., . . . . .	12	May 12	May 12
Fortress Monroe-Boston, . . . . .	500	May 14	May 18
	1,504		

May 23, Governor's inspection.



*Off-shore and Coasting Cruise.*

PORTS.	Distance (Miles).	Left.	Arrived.
Boston-St. Thomas, . . . . .	1,723	May 27	June 5
St. Thomas-Havana, . . . . .	1,039	June 8	June 13
Havana-Fortress Monroe, . . . . .	985	June 17	June 21
Fortress Monroe-Newport News, . . . . .	8	June 21	June 21
Newport News-Norfolk, . . . . .	12	June 21	June 21
Norfolk-Fortress Monroe, . . . . .	12	June 24	June 24
Fortress Monroe-Boston, . . . . .	530	June 24	June 28
Boston-President Roads, . . . . .	7	July 11	July 11
President Roads-Boothbay Harbor, . . . . .	125	July 12	July 12
Boothbay Harbor-Nantucket, . . . . .	160	July 19	July 20
Nantucket-Vineyard Haven, . . . . .	27	July 24	July 24
Vineyard Haven-Dutch Island, . . . . .	40	July 25	July 25
Dutch Island-Gardiner's Bay, . . . . .	55	July 26	July 26
Gardiner's Bay-New London, . . . . .	20	July 28	July 28
New London-Gardiner's Bay, . . . . .	20	July 31	July 31
Gardiner's Bay-New London, . . . . .	20	Aug. 3	Aug. 3
New London-Nantucket, . . . . .	105	Aug. 7	Aug. 8
Nantucket-Woods Hole, . . . . .	30	Aug. 21	Aug. 21
Woods Hole-Edgartown, . . . . .	36	Aug. 22	Aug. 22
Edgartown-Vineyard Haven, . . . . .	16	Aug. 25	Aug. 25
Vineyard Haven-Newport, . . . . .	45	Aug. 29	Aug. 29
Newport-Vineyard Haven, . . . . .	45	Sept. 3	Sept. 3
Vineyard Haven-Nantucket, . . . . .	28	Sept. 5	Sept. 5
Nantucket-Provincetown, . . . . .	75	Sept. 10	Sept. 10
Provincetown-Boston, . . . . .	50	Sept. 13	Sept. 13
	5,213		

Sept. 15, 1916, graduation exercises.

COAL REPORT.		Tons.
On hand and received, . . . . .		781.9
Expended, . . . . .		729.2
Remaining on hand, . . . . .		52.7
Expended as follows: —		
Moving ship, . . . . .		445.8
Dynamos and other auxiliaries, . . . . .		223.8
Distilling, . . . . .		40.2
Galley, . . . . .		19.4
Total, . . . . .		729.2

## THE WINTER TERM.

The graduation exercises were held on board the "Ranger" at the Charlestown Navy Yard on September 15. Diplomas were delivered to 22 cadets. The exercises began with prayer by the chaplain of the Navy Yard, and closed with an address by Hon. Frederick P. Fish, chairman of the Massachusetts State Board of Education.

The winter term began on October 23, with an entry of 29 cadets selected by competitive examination from 80 applicants. Forty-two of these qualified, but vacancies were available for only 29, the number being limited by the accommodations of the "Ranger."

A course of lectures on appropriate subjects to supplement the regular studies, delivered by persons outside the school, is being arranged for delivery on board the "Ranger" on Wednesday evenings. Those so far provided are as follows: —

Capt. Eugene E. O'Donnell, Supervising Inspector Fifth District. Subject: The United States Steamboat Inspection Service.

Mr. Francis T. Bowles. Subject: Preparedness.

Mr. Wilfred O. White. Subject: Compass Adjustment.

Mr. Winthrop L. Marvin (two lectures). Subject: The American Merchant Marine.

Mr. W. L. Turner, Chief Admeasurer, Bureau of Navigation, Washington, D. C. Subject: Ship Tonnage.

Surgeon M. Victor Safford, United States Public Health Service. Subject: Maritime Quarantine Regulations.

Assistant Naval Constructor Thomas B. Richey, U. S. N. Subject: Salvage Operations.

Assistant Naval Constructor Samuel J. Zeigler, U. S. N. Subject: Stability and Displacement.

Mr. Fitz Henry Smith, Jr. Subject: The Laws and Customs of Salvage.

Following is the study schedule for the winter term of 1916-17: —

*Winter Schedule.*

	First Class, Seamanship.	Second Class, Seamanship.	First Class, Engineers.	Second Class, Engineers.	Third Class, First Section.	Third Class, Second Section.	Fourth Class, First Section.	Fourth Class, Second Section.
Monday { 9-10, 10-11, 11-20-12, 12-12.40,	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.	Steam. Study. Mathematics. Study.	Study. Steam. Study. Mathematics.	Navigation. Study. Seamanship. Study.	Study. Navigation. Study. Seamanship.	Seamanship. Study. Steam. English.	Study. Seamanship. English. Steam.
Tuesday { 9-10, 10-11, 11-20-12, 12-12.40,	Navigation. Study. English. Study.	Study. Navigation. Study. English.	Steam. Study. Electricity. Study.	Study. Steam. Study. Electricity.	Electricity. Study. Steam. Study.	Study. Electricity. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Wednesday { 9-10, 10-11, 11-20-12, 12-12.40,	Seamanship. Study. Navigation. Study.	Study. Seamanship. Study. Navigation.	English. Study. Electricity. Study.	Study. English. Study. Electricity.	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.
Thursday { 9-10, 10-11, 11-20-12, 12-12.40,	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Steam. Study. English. Study.	Study. Steam. Study. English.	Seamanship. English. Steam. Study.	English. Seamanship. Study. Steam.	Mathematics. Study. Navigation. Study.	Study. Mathematics. Study. Navigation.
Friday { 9-10, 10-11, 11-20-12, 12-12.40,	Seamanship. Study. English. Study.	Study. Seamanship. Study. English.	Mathematics. Study. Steam. Study.	Study. Mathematics. Study. Steam.	English. Study. Mathematics. Study.	Study. English. Study. Mathematics.	Electricity. Study. Seamanship. Study.	Study. Electricity. Study. Seamanship.

The above table indicates in a general way the actual studies pursued by each class. Cadets are divided for instruction into sections, with one set of sections made up of cadets of the first and second classes combined, and the other set of the third and fourth classes combined.



The following are the officers and instructors now connected with the school: —

Superintendent and commanding officer, Capt. P. W. Hourigan, U. S. N.  
Executive officer, Lieut. Thalbert N. Alford, U. S. N.  
Navigator, A. Russell Cushing (graduate M. N. S.).  
Watch officer, Chief Boatswain Ernest V. Sandstrom, U. S. N.  
Watch officer, Albert L. Ware (graduate M. N. S.).  
Chief engineer, Machinist John O'Neill, U. S. N.  
Medical officer, Gardner N. Cobb, M.D.  
Paymaster and captain's clerk, Adolph E. Salsburg.  
Electrician, Charles A. Scott.

#### PERSONNEL.

Feb. 29, 1916, Mr. Theodore C. Howe, paymaster and captain's clerk, resigned.

March 1, 1916, Mr. Edward S. Groves appointed paymaster and captain's clerk.

April 10, 1916, Lieut. Thalbert N. Alford, U. S. N., detailed as executive officer.

April 17, 1916, Lieut. Alfred H. Miles, U. S. N., executive officer detached.

April 17, 1916, Mr. Adolph E. Salsburg appointed paymaster and captain's clerk.

April 18, 1916, Mr. Edward S. Groves, paymaster and captain's clerk, resigned.

May 29, 1916, Rear Admiral John F. Merry, U. S. N., retired, chairman of the Board of Commissioners, died.

July 1, 1916, Mr. Clarence E. Perkins of Winthrop reappointed a Commissioner.

July 5, 1916, Mr. Francis T. Bowles of Barnstable appointed Commissioner.

Aug. 13, 1916, Chief Boatswain Albert Seeckts, U. S. N., watch officer, detached.

Aug. 14, 1916, Chief Boatswain Ernest V. Sandstrom, U. S. N., detailed as watch officer.

## MEMBERSHIP OF THE SCHOOL.

*Graduating Class, March, 1916.*

Berglund, C. Edwin, . . . . .	Brockton.
Congdon, Harold R., . . . . .	Roxbury.
Elder, Randall F., . . . . .	Everett.
Gorman, Paul, . . . . .	Haverhill.
Harrington, George E., . . . . .	Worcester.
Jakmauh, Peter J., . . . . .	South Boston.
Mahoney, J. Prescott, . . . . .	West Wareham.
Martell, Charles A., . . . . .	Somerville.
Perrin, Frank M., . . . . .	Worcester.
Phillips, Alexander J., . . . . .	Easton.
Reed, Carleton G., . . . . .	Lexington.
Rylander, John A., . . . . .	Springfield.
Simmons, John W., . . . . .	Springfield.
Stevens, Percy C., . . . . .	West Barnstable.
Thomas, William W., . . . . .	Randolph.
Wadleigh, George E., . . . . .	Boston.

*Graduating Class, September, 1916.*

Bain, Joseph A., . . . . .	Lawrence.
Bianchi, Albert, . . . . .	Worcester.
Browne, Paul H., . . . . .	Roslindale.
Chase, Howard U., . . . . .	Nantucket.
Collins, Clayton W., . . . . .	Waquoit.
Condrey, Joseph P., . . . . .	Lowell.
Crowell, John T., Jr., . . . . .	Gloucester.
Dunphe, Richard H., . . . . .	Brockton.
Erickson, John, . . . . .	New Bedford.
Fletcher, Edwin T., . . . . .	Springfield.
Graham, Austin P., Jr., . . . . .	Everett.
Guba, Henry A., . . . . .	New Bedford.
Ireland, Harold S., . . . . .	Somerville.
Kenney, Arthur J., . . . . .	Brookline.
Lord, William E., . . . . .	Springfield.
Lufkin, Thomas B., . . . . .	Gloucester.
Paine, Byron H., . . . . .	New Bedford.
Pilkington, John E., . . . . .	Mansfield.
Sanford, Harold W., . . . . .	Springfield.
Standley, Richard A., . . . . .	Beverly.
Stanley, Clifford E., . . . . .	Salem.
Wilcox, Fred E., . . . . .	Indian Orchard.

*Class to Graduate, March, 1917.*

Boyd, Dwight W.,	Randolph.
Crosbie, Percy A.,	Everett.
Dennen, Charles R.,	Gloucester.
Foy, John T.,	Bridgewater.
Francis, Earl S.,	Athol.
Hopkins, Richard H.,	West Somerville.
James, Herbert A.,	Sherborn.
Jensen, Ernest C.,	Provincetown.
Kingsbury, Luther C.,	Wellesley Hills.
Moore, Frank M.,	Forest Hills.
Nichols, Philip G.,	Peabody.
Preston, William M.,	Beverly.
Sheridan, Robert H.,	Stoneham.
Upton, John,	Upton.

*Class to Graduate, October, 1917.*

Atwood, Franklin B.,	Nantucket.
Barton, Alan R.,	Winthrop.
Borden, Alton E.,	Fall River.
Budd, Rowland,	Haydenville.
Freeman, Ivan,	East Orleans.
Huffman, Charles F.,	Waltham.
Levine, Harry,	Cambridge.
Little, Philip H.,	Holbrook.
MacLaughlin, Sydney L.,	Wollaston.
MacWhinnie, Donald,	New Bedford.
Massey, Arthur,	Lawrence.
McGourty, James A.,	Worcester.
McLaren, David M.,	Dedham.
Murphy, Arthur D.,	Beverly.
Noonan, John D.,	Mansfield.
Phelan, Arthur S.,	East Lynn.
Plummer, Kenneth H.,	Roxbury.
Raby, Ernest E.,	North Easton.
Roberts, Stanley F.,	Springfield.
Roswall, Clifford,	Medford.
Rowe, A. Henry,	Roslindale.
Storey, William W.,	Stoneham.
Susmann, Herbert W.,	Dorchester.
Thresher, Russell W.,	Southbridge.
Wilson, Bradford S.,	Quincy.
Wyatt, Ernest V.,	Boston.

*Class to Graduate, March, 1918.*

Anderson, Robert P., . . . . .	Melrose.
Blair, Andrew C., Jr., . . . . .	Fall River.
Brown, Karl I., . . . . .	Arlington Heights.
Carden, John R., . . . . .	Haverhill.
Childs, George P., . . . . .	Cotuit.
Clark, Wesley C., . . . . .	Arlington Heights.
Crowley, James J., Jr., . . . . .	North Abington.
Cunningham, George M., . . . . .	Lawrence.
Dean, Ira D., . . . . .	South Natick.
Donlin, John R., . . . . .	Medford.
Evers, Ralph A., . . . . .	Medford.
Fitzgerald, William H., . . . . .	Revere.
Freeman, Joseph, . . . . .	Revere.
Gallagher, William B., . . . . .	Quincy.
Hanson, Waldemar I., . . . . .	Brockton.
Hill, Raphael W., . . . . .	Provincetown.
Hovland, Almer T., . . . . .	Newton Lower Falls.
Hurld, Bernard F., . . . . .	Stoneham.
Lowry, James H., . . . . .	Canton.
Mackie, Gordon C., . . . . .	Brookline.
McKenzie, James C., . . . . .	Roxbury.
Newman, Karl W., . . . . .	Brockton.
Nichols, Harold V., . . . . .	Malden.
Perry, Frank V., Jr., . . . . .	Provincetown.
Popkin, Jacob I., . . . . .	Malden.
Smith, John E., . . . . .	Stoneham.
Strout, Alden L., . . . . .	Boston.
Woods, Wilbur W., . . . . .	Provincetown.
Wright, Laurence A., . . . . .	Falmouth.

*Class to Graduate, October, 1918.*

Abbott, Raymond P., . . . . .	Newburyport.
Anderson, Alexander G., . . . . .	Dorchester.
Baker, Elmer N., . . . . .	Nantucket.
Caswell, Leonard N., . . . . .	Fall River.
Colson, Stuart R., . . . . .	Whitman.
Damon, Harold S., . . . . .	Plymouth.
Distelman, Max, . . . . .	Newburyport.
Easton, Francis J., . . . . .	Randolph.
Ford, Edward J., . . . . .	Wakefield.
Fraser, James E., . . . . .	Boston.
Gibbs, Arthur B., . . . . .	Nantucket.
Glines, Edgar G., . . . . .	Beverly.
Heaney, James R., . . . . .	Lynn.

Hewes, George P.,	.	.	.	.	.	.	Berlin.
Hoffses, Hartley,	.	.	.	.	.	.	Quincy.
Johnson, Louis H.,	.	.	.	.	.	.	Medford.
Kelly, Elmer J.,	.	.	.	.	.	.	Springfield.
Lowey, LeRoy B.,	.	.	.	.	.	.	Woods Hole.
McGrath, Jack R.,	.	.	.	.	.	.	Salem.
Moore, James R.,	.	.	.	.	.	.	East Lexington.
Reagh, William S.,	.	.	.	.	.	.	Cliftondale.
Sample, Raymond H.,	.	.	.	.	.	.	Montello.
Sanborn, Gerald K.,	.	.	.	.	.	.	Lawrence.
Saunders, Raymond E.,	.	.	.	.	.	.	Somerville.
Stevens, Paul A.,	.	.	.	.	.	.	Stoneham.
Stockbridge, George R.,	.	.	.	.	.	.	Wellesley.
Stratton, Henry T.,	.	.	.	.	.	.	Worcester.
Walen, Leonard C.,	.	.	.	.	.	.	Gloucester.

CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1916, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Withdrawn, dismissed, dropped.	Number connected with the School.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.		
1893,	138	-	138	-	-	-	29	-	29	24	138
1894,	42	21	63	-	-	-	26	17	43	18	156
1895,	33	38	71	19	19	38	6	6	12	6	156
1896,	35	39	74	20	17	37	16	15	31	17	174
1897,	32	41	73	20	21	41	10	10	20	9	165
1898,	42	57	99	15	25	40	12	14	26	23	194
1899,	34	45	79	11	12	23	24	17	41	11	184
1900,	28	50	78	14	36	50	9	12	21	14	186
1901,	34	37	71	11	18	29	8	12	20	16	172
1902,	32	58	90	16	22	38	16	18	34	13	197
1903,	34	32	66	17	14	31	10	15	25	17	178
1904, <sup>1</sup>	-	-	60	16	29	45	5	12	17	31	165
1905, <sup>1</sup>	-	-	65	10	10	20	-	-	9	13	137
1906, <sup>1</sup>	-	-	50	16	19	35	-	-	18	19	145
1907, <sup>1</sup>	-	-	60	10	15	25	-	-	17	26	133
1908, <sup>1</sup>	-	-	45	8	9	17	-	-	9	9	110
1909, <sup>1</sup>	-	-	81	14	22	36	-	-	7	16	156
1910, <sup>1</sup>	-	-	54	6	15	21	-	-	16	15	151
1911, <sup>1</sup>	-	-	69	20	23	43	-	-	7	18	168
1912, <sup>1</sup>	-	-	57	17	16	33	-	-	14	15	157
1913, <sup>1</sup>	-	-	79	21	19	40	-	-	20	8	174
1914, <sup>1</sup>	-	-	65	20	16	36	-	-	22	7	171
1915, <sup>1</sup>	-	-	70	26	19	45	-	-	18	11	176
1916, <sup>1</sup>	-	-	73	23	15	38	-	-	36	3	175
	-	-	1,730	350	411	761	-	-	512	359	-

<sup>1</sup> Beginning in 1904, the cadets upon entrance are unclassified until their second year.

## REGISTER OF GRADUATES.

Graduated.	NAME.	Residence.	Position.	Vessel.
1902	Osborne E. McKay, . .	Provincetown, .	Pilot, . . .	Panama Canal.
1902	Arthur T. Luther, . .	Swansea, . .	Pilot, . . .	Panama Canal.
1894	Henry G. Carpenter, <sup>1</sup> .	Roxbury, . .	Captain, . .	"Frances Alice."
1894	James E. Reardon, <sup>1</sup> .	Roxbury, . .	Captain, . .	"Moldegaard" (4,500 tons).
1895	George E. Eaton, . .	Wakefield, .	Captain, . .	"Anemone."
1895	Walter J. Healey, . .	Worcester, .	Captain, . .	"Bayway " (5,083 tons).
1896	Henry R. Bodge, . .	Wollaston, .	Captain, . .	"Northland" (3,282 tons).
1896	Wm. N. P. Baker, . .	Dorchester, .	Captain, . .	"Mariana" (3,063 tons).
1896	George R. Lauriat, . .	Medford, . .	Captain, . .	"Pickering."
1897	Mina Dailey, . . .	Rockport, .	Captain, . .	-
1897	Frederick A. Sparks, .	Provincetown, .	Captain, . .	"Machigonne."
1897	Willis Howes, . . .	So. Yarmouth, .	Captain, . .	"El Aguilela."
1897	Emery Rice, . . .	Brighton, . .	Captain, . .	"Mongolia" (13,658 tons).
1898	Louis E. Congdon, . .	Boston, . .	Captain, . .	"Nueces" (3,367 tons).
1898	Carl E. A. Anderson, .	Roslindale, .	Captain, . .	"Honolulan" (7,059 tons).
1899	Richard T. Blackford, .	Marblehead, .	Captain, . .	"Jessie Costa."
1899	Edward G. Smith, . .	Boston, . .	Captain, . .	"Francis Hanify" (2,588 tons).
1900	William B. Knight, . .	Hull, . . .	Captain, . .	"Norwood."
1900	James S. Howes, . . .	Woods Hole, .	Captain, . .	"Juniata."
1901	Theodore H. Bicknell, .	Melrose, . .	Captain, . .	"Hewitt" (5,334 tons).
1902	Fred C. Seibert, . . .	Greenfield, .	Captain, . .	"Solace" (5,700 tons).
1903	Harry M. Bostwick, . .	Northbridge, .	Captain, . .	"Abarenda" (6,705 tons).
1903	Nicholas J. Kane, . .	Whitman, . .	Captain, . .	"Panaman" (6,649 tons).
1903	Robert B. Powers, . .	Brockton, . .	Captain, . .	"Ajax" (9,250 tons).
1904	John F. Williamson, . .	Brockton, . .	Captain, . .	"Myrtle."
1907	Frederic A. Gainard, . .	Chelsea, . .	Captain, . .	"Wm. O'Brien" (5,483 tons).
1908	Eugene P. Shevlin, . .	East Boston, .	Captain, . .	"Gardenia."
1908	Edw. S. Ells, Jr., . .	Cambridge, .	Captain, . .	"Vulcan" (11,200 tons).
1895	Geo. L. P. Covell, . .	Roxbury, . .	First officer, .	Inter-Island Steamship Company.
1897	Chas. W. Clift, . . .	Whitman, . .	First officer, .	"Gen. E. O. C. Ord."
1898	Eldon G. Freeman, . .	Whitman, . .	First officer, .	"Sequoia."
1899	Walter S. Lynch, . . .	Chelsea, . .	First officer, .	"Kroonland."
1900	Alfred M. Cummings, .	Worcester, .	First officer, .	"Edith."
1900	E. Newton Parker, . .	Greenfield, .	First officer, .	"Nero."
1901	Robert W. Tucker, . .	Kendal Green, .	First officer, .	"Kansan."
1901	John J. Coholan, . . .	South Boston, .	First officer, .	"Jonancy."
1901	Chas. D. Harrington, .	Cambridge, .	First officer, .	"Mascotte."

<sup>1</sup> Transferred.



REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1902	William I. O'Reilly, . .	South Boston, .	First officer, .	"Queen."
1902	Arthur Jensen, . .	Provincetown, .	First officer, .	"Nanshan."
1902	Edwin J. Madden, . .	Everett, . .	First officer, .	"St. Louis."
1903	Harold S. Rideout, . .	Concord, . .	First officer, .	"Comus."
1904	Andrew J. Iverson, . .	Beverly, . .	First officer, .	Boston and Virginia Transport Com- pany.
1904	Edward C. Roberts, . .	North Beverly, .	First officer, .	"Panama."
1905	Fred'k S. Walker, . .	Dorchester, . .	First officer, .	"Malden."
1905	James A. Crocker, . .	Nahant, . .	First officer, .	"Hewitt."
1905	Harry W. Maynard, . .	Winthrop, . .	First officer, .	"Sumac."
1906	William H. Lee, . .	Roxbury, . .	First officer, .	"Kanawha."
1907	William M. Gifford, . .	Woods Hole, . .	First officer, .	N a v a l Auxiliary Service.
1907	Harry L. Chick, . .	Beverly, . .	First officer, .	"Saturn."
1908	Ernest F. Robinson, . .	East Boston, . .	First officer, .	"Sterling."
1909	Carroll E. Higgins, . .	Somerville, . .	First officer, .	American-Hawaiian Line.
1909	Robert S. Sparrow, . .	Eastham, . .	First officer, .	"Columbian."
1910	Chester R. Morris, . .	Springfield, . .	First officer, .	"Myrtle."
1911	William M. Gorham, . .	Winthrop, . .	First officer, .	"Muskogee."
1912	Robert M. Gray, . .	Melrose, . .	First officer, .	"Wm. A. McKen- ney."
1912	Ellenwood Folger, . .	Siasconset, . .	First officer, .	"Glenpool."
1894	Albert L. Warner, <sup>1</sup> . .	Wollaston, . .	Second officer, .	"Geo. E. Hawley."
1897	Edwin F. Darling, . .	West Dennis, . .	Second officer, .	"Jonancy."
1900	Joseph E. Gately, . .	Marlborough, . .	Second officer, .	"Princess Ann."
1902	Louis G. Ruggles, . .	Neponset, . .	Second officer, .	"Vulcan."
1903	Mark Woodbury, . .	Townsend, . .	Second officer, .	"Iowan."
1903	Benj. O'Connell, . .	Peabody, . .	Second officer, .	"Philadelphia."
1904	Leslie F. Holmes, . .	East Whitman, . .	Second officer, .	"Antilles."
1905	Harold H. Gridley, . .	Dorchester, . .	Second officer, .	"Muskogee."
1906	William A. Manchester, . .	Brockton, . .	Second officer, .	"Nereus."
1907	Walter L. Smith, . .	Ashburnham, . .	Second officer, .	"Aborean."
1907	Frazier L. Sears, . .	East Dennis, . .	Second officer, .	Standard Oil Com- pany.
1909	William A. Sillars, . .	Danvers, . .	Second officer, .	"Malden."
1909	Harold C. Cooper, . .	Worcester, . .	Second officer, .	Standard Oil Com- pany.
1910	Franklin K. Tyler, . .	Beachmont, . .	Second officer, .	"Westoil."
1911	Henry O. K. Hanson, . .	Neponset, . .	Second officer, .	"Brandon."
1911	Fred'k J. Shaw, . .	Cambridge, . .	Second officer, .	"Cyclops."
1911	Eugene W. Miller, . .	East Saugus, . .	Second officer, .	"Minnesota."
1911	Norris T. Ela, . .	East Douglas, . .	Second officer, .	"Medina."

<sup>1</sup> Transferred.

REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1911	Chas. F. Fornason, . .	Gloucester, .	Second officer, .	"Pultonia."
1911	Harold S. Dexter, . .	Mattapoisett, .	Second officer, .	"Cæsar."
1911	Raymond C. Vose, . .	Cambridge, .	Second officer, .	"Nereus."
1911	Charles C. Plummer, .	Cambridge, .	Second officer, .	"Harvey H. Brown."
1912	Herbert A. Burns, . .	New Bedford, .	Second officer, .	"Glenpool."
1912	Ralph E. Merithew, .	Haverhill, .	Second officer, .	"Massapequa."
1912	Harold Ertel, . . .	Longmeadow, .	Second officer, .	"Carolyn."
1912	John W. Thompson, .	Marion, . . .	Second officer, .	"Anemone."
1913	Waldon A. McIntire, .	Gloucester, .	Second officer, .	"Santiago."
1913	Arthur G. Burt, . . .	Whitman, . .	Second officer, .	"Brazos."
1913	James A. MacCabe, .	Osterville, .	Second officer, .	- -
1913	Frank H. Nelson, . .	Fall River, .	Second officer, .	"Isthmian."
1906	Geo. C. Bosson, . . .	Reading, . . .	Third officer, .	"Newton."
1907	Elmer B. Small, . . .	North Truro, .	Third officer, .	"Sunlite."
1908	Chester B. Mellen, . .	Quincy, . . .	Third officer, .	"Hampden."
1909	Eric E. Winquist, . .	Jamaica Plain, .	Third officer, .	"Kanawha."
1911	Wesley F. Besse, . .	South Hanson, .	Third officer, .	Standard Oil Com- pany.
1912	Wm. H. O'Donoghue, .	Roxbury, . .	Third officer, .	"Arethusa."
1912	Clarence L. Howard, .	Auburndale, .	Third officer, .	- -
1912	Alex. G. Perkins, . .	Newburyport, .	Third officer, .	"Achilles."
1912	Jos. M. Daniel, . . .	Osterville, . .	Third officer, .	"Kentuckian."
1913	John A. Maddock, . .	Newburyport, .	Third officer, .	"Hector."
1913	Gregory B. Nichols, .	Danvers, . . .	Third officer, .	"Limon."
1913	Philip H. Waldron, .	Westborough, .	Third officer, .	"L. V. Stoddard."
1913	Philip J. Fanning, . .	Needham, . .	Third officer, .	"Maracaibo."
1913	Wilfred Senior, . . .	Boston, . . .	Third officer, .	"Ohioan."
1913	Borden A. Tuell, . . .	New Bedford, .	Third officer, .	"City of Atlanta."
1913	Nelson T. Nutter, . .	Newburyport, .	Third officer, .	"Vulcan."
1913	Everett O. Swinson, .	East Gloucester, .	Third officer, .	"Allianca."
1914	Ten Eyck H. Reed, . .	South Framing- ham.	Third officer, .	"Muskogee."
1914	Samuel J. Lee, . . .	Roxbury, . . .	Third officer, .	"Cæsar."
1914	Joseph L. Turner, . .	Amherst, . . .	Third officer, .	"Dakotan."
1914	F. Palmer Harrington, .	Malden, . . .	Third officer, .	"Kansan."
1914	Samuel A. Gates, . .	Malden, . . .	Third officer, .	"Panaman."
1914	Gerard R. Crosby, . .	Orleans, . . .	Third officer, .	"Minnesotan."
1914	Edward D. Newell, . .	Gloucester, .	Third officer, .	"Lexington."
1914	James A. Stowell, . .	Walpole, . . .	Third officer, .	"San Juan."

REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1915	Curtis C. Fales, . .	Westborough, .	Third officer, .	"Brutus."
1915	William J. Bonner, . .	Dorchester, .	Third officer, .	"Kanawha."
1915	Ralph S. Moore, . .	Newton, . .	Third officer, .	"Montanan."
1915	Chas. H. Hurley, . .	Westminster, .	Third officer, .	"Oregonian."
1915	Earle D. Hammond, . .	Mattapoisett, .	Third officer, .	- -
1915	Charles N. Bamforth, .	South Lincoln, .	Third officer, .	- -
1902	A. Russell Cushing, . .	Dorchester, .	Navigating officer,	"Ranger."
1911	Albert L. Ware, . .	Cambridge, .	Watch officer, .	"Ranger."
1898	Joseph E. Sheedy, . .	Reading, . .	General superintendent.	Inter-Island Steam Navigation Company.
1906	Howard G. Copeland, .	Malden, . .	Superintendent, .	Massachusetts Naval Cadet School.
1906	Ernest J. Flanigan, . .	Wakefield, .	Instructor, . .	Massachusetts Naval Cadet School.
1898	George F. Waite, . .	Winthrop, . .	Chief inspector of steamboats.	Providence, R. I.
1896	Alvin W. Haynes, . .	Somerville, .	Assistant inspector of hulls.	New York, N. Y.
1902	Herman T. Parker, . .	Rockport, . .	Assistant inspector of hulls.	Boston, Mass.
1899	Frank B. Davis, . .	Dorchester, .	Assistant inspector of boilers.	New Orleans, La.
1898	Clarence E. Wood, . .	Fall River, .	Lieutenant, . .	U. S. Navy.
1907	Thomas Baxter, . .	South Dennis, .	Lieutenant, . .	U. S. Navy.
1895	Philip W. Lauriat, . .	Medford, . .	1st Lieut., U. S. C. G. S.	Purchasing officer, San Francisco, Cal.
1899	James A. Alger, . .	Reading, . .	1st Lieut., U. S. C. G. S.	"Pamlico."
1900	John F. McGourty, . .	Worcester, . .	2d Lieut., U. S. C. G. S.	"Tampa."
1906	William F. Towle, . .	Boston, . .	2d Lieut., U. S. C. G. S.	"Androscoggin."
1896	Charles S. Young, . .	Boston, . .	Nautical expert, .	Navy Department.
1897	Fred'k W. Jones, . .	Winchester, .	Nautical expert, .	Navy Department.
1900	Gershom Bradford, . .	Duxbury, . .	Nautical expert, .	Navy Department.
1903	Leander A. Clapp, . .	Brockton, . .	1st Lieutenant, .	U. S. Marine Corps.
1906	Clarence E. Nutting, .	Cambridge, .	1st Lieutenant, .	U. S. Marine Corps.
1894	Horace W. Folger, <sup>1</sup> . .	Wilmington, .	Pilot, . . .	Boston Pilot Boat Service.
1900	I. Clarence Bailey, . .	Kingston, . .	Pilot, . . .	Boston Pilot Boat Service.
1914	John L. Kirchner, . .	Hinsdale, . .	Pilot, . . .	"Mohawk."
1896	James H. B. Meehan, .	Lowell, . .	Chief engineer, .	"Proteus" (19,000 tons).
1897	Augustus T. Holmes, .	Ipswich, . .	Chief engineer, .	"J. M. Guffey" (2,520 tons).
1897	Edward J. Cogan, . .	Lynn, . .	Chief engineer, .	- -
1898	Charles E. Rowe, . .	Lynn, . .	Chief engineer, .	- -
1898	John C. Ganser, . .	Jamaica Plain, .	Chief engineer, .	"Caribbean" (2,800 tons).
1898	Everett S. Ransom, . .	Mattapoisett, .	Chief engineer, .	"Parthenia."
1898	William E. Ballsdon, .	Neponset, . .	Chief engineer, .	"Herman Winter."

<sup>1</sup> Transferred.

REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1898	Wilbur S. Lamont, . .	Leominster, .	Chief engineer, .	Panama Canal.
1899	Forest D. Clark, . .	Dorchester, .	Chief engineer, .	"Harvard" (3,737 tons).
1900	Hollis M. Cornwall, .	Melrose, . .	Chief engineer, .	"Persian" (2,677 tons).
1900	William Glover, . .	Wilmington, .	Chief engineer, .	"J. H. Devereaux" (1,618 tons).
1900	Norris R. Sibley, . .	Worcester, .	Chief engineer, .	"Col. Wikoff."
1900	Charles E. Lowe, . .	Roxbury, . .	Chief engineer, .	"Cacique" (6,202 tons).
1900	Elmer P. Butterworth, .	Foxborough, .	Chief engineer, .	"Gulfight" (5,188 tons).
1901	Robert A. Patterson, .	Brighton, . .	Chief engineer, .	"S o l a c e" (5,700 tons).
1901	David W. Warren, . .	Everett, . .	Chief engineer, .	"Carrier" (4,711 tons).
1901	Eugene I. K. Murphy, .	Worcester, .	Chief engineer, .	Government vessel, Panama Canal.
1902	Daniel F. Butler, . .	North Easton, .	Chief engineer, .	"Gloria."
1903	James S. McGarry, . .	Shrewsbury, .	Chief engineer, .	"El Paso" (3,531 tons).
1903	Edward A. Mercer, . .	Cambridge, .	Chief engineer, .	"Hector" (11,250 tons).
1904	Cecil L. McIntyre, . .	Upton, . . .	Chief engineer, .	- -
1905	Walter C. Lockhart, .	Wakefield, .	Chief engineer, .	- -
1906	Augustus C. Caldwell, .	Dorchester, .	Chief engineer, .	"Ajax" (9,250 tons).
1909	Samuel J. Miller, . .	Fall River, .	Chief engineer, .	"Brutus" (6,600 tons).
1910	Geo. W. Sibley, . . .	Worcester, .	Chief engineer, .	"Transportation" (1,015 tons).
1895	Michael D. Sullivan, .	Boston, . . .	First engineer, .	"Enterprise."
1896	Forrest H. McIntyre, .	Gloucester, .	First engineer, .	"Daniel Millard."
1898	Frank P. Killion, . .	Malden, . . .	First engineer, .	"Kanai."
1900	James F. Rawdon, . .	Worcester, .	First engineer, .	"Tuscan."
1901	Frank A. Browne, . .	Westborough, .	First engineer, .	Isthmian Canal Commission.
1904	Charles W. Bumpus, . .	Wakefield, .	First engineer, .	"Cape Ann."
1904	Edw. J. Chadbourne, .	Reading, . .	First engineer, .	"Henry F. Dimock."
1905	Fred G. Carlton, . .	Maynard, . .	First engineer, .	"Onondaga."
1905	Charles F. Tarr, . . .	Taunton, . .	First engineer, .	"Cyclops."
1906	Bradford N. A. Gladding,	New Bedford, .	First engineer, .	"Cyclops."
1906	Arthur G. Burbank, . .	Carver, . . .	First engineer, .	"Hector."
1907	Fred'k M. Coughlin, .	N o r t h D a r t - mouth.	First engineer, .	Army tug, New- port.
1907	George H. Stickney, .	Worcester, .	First engineer, .	"Nanshan."
1907	Archie E. Bragg, . . .	New Bedford, .	First engineer, .	"Saturn."
1908	Thos. B. Pellett, . .	Worcester, .	First engineer, .	"Orion."
1911	Robt. F. Phinney, . .	Roslindale, .	First engineer, .	"Cushing."
1895	Fred'k H. Stackpole, .	Hyde Park, .	Second engineer, .	"City of Brockton."
1896	John O. Sargent, . .	Worcester, .	Second engineer, .	"St. Louis."
1898	Arthur P. Stevens, . .	Nantucket, .	Second engineer, .	"Ponce."

REGISTER OF GRADUATES — *Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1900	Ressie E. Bowser, . .	North Abington.	Second engineer, .	"Nero."
1900	Earle P. Marshall, . .	North Easton, .	Second engineer, .	"Uruguay."
1901	Sydney A. Maglathlin, .	West Bridge-water.	Second engineer, .	"Arethusa."
1902	Augustus W. Hart, . .	North Truro, .	Second engineer, .	"Chippewa."
1902	Ernest L. Saunders, . .	Brockton, . .	Second engineer, .	"Justin."
1905	Thomas W. Chisholm, .	North Billerica,	Second engineer, .	- -
1906	Victor M. Foster, . .	East Boston, .	Second engineer, .	"Newton."
1906	John C. Sheedy, . .	Malden, . .	Second engineer, .	New York-Hono-lulu.
1907	Philip B. Marcy, . .	Boston, . .	Second engineer, .	"Oklahoma."
1907	Jos. R. Wier, . .	Saundersville, .	Second engineer, .	"Nero."
1908	George H. Cameron, . .	Wakefield, . .	Second engineer, .	"Keyvive."
1909	Everett B. Ward, . .	Lynn, . .	Second engineer, .	"Saturn."
1909	William E. Caddigan, .	Dorchester, .	Second engineer, .	"Lewis K. Thurlow."
1909	Ervin L. Kelley, . .	Medford, . .	Second engineer, .	"Azalea."
1910	Leslie S. Badger, . .	Dorchester, .	Second engineer, .	"Seaconnet."
1910	Wm. M. Bowen, . .	Boston, . .	Second engineer, .	"Bunker Hill."
1910	R. Wilbur Anderson, .	Mattapan, . .	Second engineer, .	"Massachusetts."
1911	Geo. L. Lockhart, . .	Wakefield, . .	Second engineer, .	"Hector."
1911	Samuel D. White, . .	Hyannisport, .	Second engineer, .	"Bunker Hill."
1912	Richard K. O'Connell, .	North Easton, .	Second engineer, .	"Currier."
1912	Louis H. Racicot, . .	Lowell, . .	Second engineer, .	"Jason."
1912	Wm. A. Hamilton, . .	Cliftondale, .	Second engineer, .	"Cyclops."
1913	Earle A. Lewis, . .	Woods Hole, .	Second engineer, .	Munson Line.
1903	Rudolph Komenda, . .	Somerville, . .	Third engineer, .	"Hannibal."
1909	Fritz T. Kebler, . .	Rochdale, . .	Third engineer, .	"Onondaga."
1910	Ernest B. Wyatt, . .	Wakefield, . .	Third engineer, .	"Vulcan."
1912	Albert W. Culley, . .	Fitchburg, . .	Third engineer, .	"Vulcan."
1912	Geo. R. Davison, . .	Springfield, .	Third engineer, .	"Advance."
1912	Walter L. Brewster, .	Somerville, . .	Third engineer, .	"F. J. Lisman."
1913	Nils J. Peterson, . .	Brockton, . .	Third engineer, .	"Proteus."
1913	Russell A. McLay, . .	Lawrence, . .	Third engineer, .	- -
1914	Leslie T. Severance, .	Cambridge, . .	Third engineer, .	"Arlington."
1915	Bernhardt Gerecke, . .	Boston, . .	Third engineer, .	"Altamaha."
1914	Arthur F. Goodwin, . .	Cambridge, . .	Fourth engineer, .	"Tennyson."
1897	Lorenzo C. Farwell, . .	Dorchester, .	1st Lieut., Eng., U. S. C. G. S.	"Gresham."
1896	Webb C. Maglathlin, .	Bridgewater, .	2d Lieut., Eng., U. S. C. G. S.	"Arcata."
1897	Albert F. Patterson, .	Townsend, . .	2d Lieut., Eng., U. S. C. G. S.	"Yamacraw."



REGISTER OF GRADUATES — *Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel.
1898	John T. Carr, . . .	Malden, . . .	2d Lieut., Eng., U. S. C. G. S.	"Penrose."
1906	Henry C. Roach, . . .	New Bedford, . . .	2d Lieut., Eng., U. S. C. G. S.	"Androscoggin."
1907	Paul R. Smith, . . .	Concord, . . .	3d Lieut., Eng., U. S. C. G. S.	"Seminole."
1895	Charles H. Lincoln, . . .	Gloucester, . . .	Marine surveyor,	Cleveland, Ohio.
1898	Herbert E. Fish, . . .	Mattapoissett, . . .	Chief machinist, . . .	U. S. Navy.
1896	H. E. Kershaw, . . .	Lawrence, . . .	Machinist, . . .	U. S. Navy.
1903	C. Allan Holbrook, . . .	Marlborough, . . .	Machinist, . . .	"Oregon."
1902	John F. Murphy, . . .	Worcester, . . .	Gunner, . . .	"Delaware."
1900	Hugh H. McDonagh, . . .	Worcester, . . .	Electrician, . . .	"Cæsar."
1903	Fred S. Garland, . . .	Randolph, . . .	Electrician, . . .	"Alabama."
1903	Guy H. Hudson, . . .	Somerville, . . .	Electrician, . . .	"Alabama."
1904	Charles A. Hill, . . .	Melrose, . . .	Electrician, . . .	"Bay State."
1904	C. George Dyson, . . .	Billerica, . . .	Electrician, . . .	"Delaware."
1905	Lawrence G. Kelley, . . .	Taunton, . . .	Electrician, . . .	"Illinois."
1905	John F. Kinnaly, . . .	South Boston, . . .	Electrician, . . .	"Vermont."
1906	Carroll L. Morgan, . . .	Beverly, . . .	Navy wireless electrician.	San Juan, P. R.
1906	Louis H. Houghton, . . .	Worcester, . . .	Electrician, . . .	"Missouri."
1906	William R. Dolan, . . .	Worcester, . . .	Chief electrician, . . .	"Patterson."
1907	Eugene E. Chaney, . . .	Arlington, . . .	Electrician, . . .	"North Dakota."
1907	Louis L. LaMontagne, . . .	Millers Falls, . . .	Electrician, . . .	"Pilgrim."
1910	Howell S. Loundes, . . .	Worcester, . . .	Electrician, . . .	"Georgia."
1911	Harvey M. Thorndike, . . .	Swampscott, . . .	Electrician, . . .	"Nereus."
1911	Patrick S. Coakley, . . .	Malden, . . .	Electrician, . . .	Submarine "C-2."
1911	Walter P. Lynn, . . .	Beverly, . . .	Electrician, . . .	"Birmingham."

## APPROPRIATIONS.

The appropriations for the school for the fiscal year 1916, from Dec. 1, 1915, to Nov. 30, 1916, are here accounted for as follows:—

*Current Expenses.*

Appropriation,	. . . . .	\$62,000 00
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## Expended:—

Pay roll,	. . . . .	\$31,725 23
Provisions,	. . . . .	17,455 70
Seamanship department,	. . . . .	1,684 63
Engineering department,	. . . . .	7,238 85
Instruction,	. . . . .	953 37
Miscellaneous,	. . . . .	2,937 36

Total amount expended,	. . . . .	61,995 14
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Balance unexpended,	. . . . .	\$4 86
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*Office Expenses.*

Appropriation,	. . . . .	\$6,000 00
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## Expended:—

Salaries,	. . . . .	\$3,199 00
Rent of office and janitor's service,	. . . . .	1,115 00
Advertising,	. . . . .	343 50
Printing,	. . . . .	502 11
Stationery and postage,	. . . . .	339 72
Telephone and telegrams,	. . . . .	152 62
Commissioners' expenses,	. . . . .	98 18
Miscellaneous,	. . . . .	256 23

Total amount expended,	. . . . .	\$6,006 36
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Less amount allowed by Retirement Asso-		
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ciation,	. . . . .	9 58
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5,996 78
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Balance unexpended,	. . . . .	\$3 22
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Respectfully submitted,

FRANCIS T. BOWLES, *Chairman.*

WILLIAM E. McKAY.

CLARENCE E. PERKINS.



## FEDERAL AND STATE LEGISLATION.

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### AUTHORITY OF THE UNITED STATES.

H. R. 24145. APPROVED MARCH 4, 1911.

(Original Act passed June 20, 1874.)

#### AN ACT FOR THE ESTABLISHMENT OF MARINE SCHOOLS, AND FOR OTHER PURPOSES.

That the Secretary of the Navy, to promote nautical education, is hereby authorized and empowered to furnish, upon the application in writing of the governor of a State, a suitable vessel of the navy, with all her apparel, charts, books, and instruments of navigation, provided the same can be spared without detriment to the naval service, to be used for the benefit of any nautical school, or school or college having a nautical branch, established at each of the following ports of the United States: Boston, Philadelphia, New York, Seattle, San Francisco, Baltimore, Detroit, Saginaw (Michigan), Norfolk, and Corpus Christi, upon the condition that there shall be maintained at such port a school or branch of a school for the instruction of youths in navigation, steamship-marine engineering, and all matters pertaining to the proper construction, equipment, and sailing of vessels or any particular branch thereof.

SECTION 2. That a sum not exceeding the amount annually appropriated by any State or municipality for the purpose of maintaining such a marine school or schools or the nautical branch thereof is hereby authorized to be appropriated for the purpose of aiding in the maintenance and support of such school or schools: *provided, however*, that appropriations shall be made for one school in any port heretofore named in section one and that the appropriation for any one year shall not exceed twenty-five thousand dollars for any one school.

SECTION 3. That the President of the United States is hereby authorized, when in his opinion the same can be done without detriment to the public service, to detail proper officers of the navy as superintendents of or instructors in such schools: *provided*, that if any such school shall be discontinued, or the good

of the naval service shall require, such vessel shall be immediately restored to the Secretary of the Navy and the officers so detailed recalled: *and provided further*, that no person shall be sentenced to or received at such schools as a punishment or commutation of punishment for crime.

SECTION 4. That all laws and parts of laws in conflict herewith are hereby repealed.

## AUTHORITY OF THE STATE OF MASSACHUSETTS.

CHAPTER 45, REVISED LAWS, AS AMENDED BY CHAPTER 171, ACTS OF 1903, AND CHAPTER 224, ACTS OF 1913.

### THE NAUTICAL SCHOOL.

SECTION 1. There shall be a board of commissioners of the Massachusetts nautical school consisting of three citizens of the commonwealth, one of whom shall annually, before the first day of July, be appointed by the governor, with the advice and consent of the council, for a term of three years from said first day of July.

SECTION 2. Said commissioners shall serve without compensation, but they shall be reimbursed by the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 3. They shall provide and maintain a nautical school for the instruction and training of pupils in the science and practice of navigation, shall provide accommodations for the school on board a proper vessel, purchase and provide books, stationery, apparatus and supplies needed in the work of the school, appoint and remove instructors and other necessary employees, determine their number and compensation, fix the terms and conditions upon which pupils shall be received and instructed in the school and be discharged or dismissed therefrom, establish all regulations necessary for its proper management and shall from time to time provide for cruises in or from the harbor of Boston.

SECTION 4. They may receive from the United States government, and use for the accommodation of the school, such vessels as the secretary of the navy may detail.

SECTION 5. They may annually expend such sum as the general court may from year to year appropriate, which shall be paid by the commonwealth; and they shall annually submit an estimate of the expense required in making cruises in or from the

harbor of Boston, and the amount of said estimate, after approval by the governor and council and subject to the provisions of chapter six, shall be advanced to the commanding officer of the vessel detailed therefor, who shall give a bond in the sum of ten thousand dollars, with sureties approved by the governor and council, for its proper disbursement. Said advance shall not exceed ten thousand dollars for six months, and shall be accounted for by properly approved vouchers within thirty days after the termination of said cruises.

SECTION 6. They shall annually, in January, report to the general court a detailed statement of all moneys appropriated and expended during the preceding year for the nautical school, stating the results of the work during such year and making any necessary recommendations.













The "Ranger" leaving Boston on the Annual Summer Cruise.

TWENTY-SIXTH ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

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JANUARY 1, 1918



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COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL

2A PARK STREET, BOSTON

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FRANCIS T. BOWLES, *Chairman*

WILLIAM E. MCKAY

CLARENCE E. PERKINS

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WILLIAM H. DIMICK, *Secretary*





# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The commissioners have the honor to submit their report of the operations of the school for the year 1917, the twenty-sixth year of the maintenance of this maritime school by the Commonwealth.

### THE PURPOSE OF THE NAUTICAL SCHOOL AND THE COURSE OF INSTRUCTION.

The course of instruction, given in detail later in this report, covers two years, and is intended to prepare young men for service as deck and engineer officers in the American merchant marine. The instruction is carried out on board the U. S. S. "Ranger," a steam sloop-of-war, loaned to the Commonwealth by the United States Navy Department. The students are divided into four classes, one graduating each spring and autumn; they are instructed by the officers of the ship, who also on the summer cruise, extending from May until October, perform the regular ship duties of their positions. During the winter months the "Ranger" is moored at the North End Park in Boston, and the school continues on board the ship. Students are admitted by competitive examination in the spring and fall. The expense to those taking the course is limited to the cost of clothing, books, etc., amounting to \$90 the first year and \$25 the second year.

### THE SCHOOL RECORD.

During the year there have been 167 students on the rolls of the school, the sons of citizens of Massachusetts. They came from 77 cities and towns of the Commonwealth, and their previous education was as follows: high schools, 138; academies, 6; technical schools and business colleges, 3; grammar schools, 20. The average age of the cadets at entrance was seventeen years. There have been graduated during the year 36 cadets, 12 in the spring and 24 in the autumn. The number of cadets enrolled in the school at present is 112, this being the largest number the "Ranger" can accommodate.

### GRADUATION EXERCISES.

Graduation exercises were held on March 19, 1917, at the close of the winter term. The chairman, Mr. Francis T. Bowles, presided, and the cadets were addressed by Lieutenant Governor Calvin Coolidge. The Alumni Association of the school offered prizes to the two cadets receiving the highest marks in studies and practical work; these prizes were awarded to Luther C. Kingsbury in the seamanship class and to Herbert A. James in the engineering class.

The autumn graduation exercises were held on September 13, the ship being anchored in the harbor. The principal address was made by Mr. Clarence E. Perkins, a commissioner of this school.

### THE DEMAND FOR NAUTICAL EDUCATION.

The demand for nautical education has increased so that the school cannot accommodate one-half of the qualified applicants for admission, as was evidenced at the entrance examination held in September when 148 boys took the examination to fill 24 vacancies.

A ship with accommodations for 200 pupils would better meet the needs of the school. On account of the existing urgent need of ship tonnage for purposes of the war it would be difficult, if not impossible, to obtain for the use of the school at the present time a much larger ship than the "Ranger;" but it might be possible to obtain a ship of the same size that could be used for a port ship, keeping the U. S. S. "Ranger" for cruising pur-

poses, so that half of the cadets could be under practical instruction at sea while the other half was studying and training on board the port ship. In this way the number of cadets graduated each year would be doubled at this time when their services are of the highest importance to the merchant marine.

Graduates of the school who have reached the age of nineteen years are eligible immediately for examination for a third officer's license or for a third assistant engineer's license.

The European war places upon the United States the burden and duty of providing ship tonnage for the commerce of the world, and the output of training schools (similar to that which has been maintained by Massachusetts for the past twenty-six years) will be continuously required to furnish officers for the rapidly expanding fleet now under construction.

#### THE ASSIGNMENT OF GRADUATES.

Through the effective co-operation of shipowners, marine superintendents and officers, the commissioners have continued to place graduates in satisfactory positions in the merchant marine; as already indicated the demand for the graduates is in excess of the number that become available from year to year.

#### REVISED RULES OF THE UNITED STATES STEAMBOAT INSPECTION SERVICE.

Amendments to the General Rules and Regulations of the United States Steamboat Inspection Service, approved by the Secretary of Commerce on June 12, 1917, have an important bearing upon the graduates of the school, and greatly improve their status as they enter upon the work of their calling.

Under the new rules a graduate nineteen years of age is eligible for examination for a third officer's license; after three months' service in the deck department of ocean or coastwise steam vessels he is eligible for a second officer's certificate; after one year's service as a licensed second officer he is eligible for a chief officer's certificate; after one year's service as chief officer of ocean steam vessels he is eligible for a license as master.

A graduate nineteen years of age is eligible for examination for a third assistant engineer's license; after three months' service in the engine department of ocean or coastwise steam

vessels he is eligible for a second assistant engineer's license; after six months' service in the engine department of ocean or coastwise steam vessels he is eligible for a first assistant engineer's license; after one year's service as first assistant engineer of ocean or coastwise steam vessels he is eligible for a chief engineer's license.

Under these rules it is possible for a seaman graduate to obtain a master's license at the age of twenty-one years and three months, and an engineer graduate can obtain a license as chief engineer when he is twenty-one years of age.

#### GRADUATES IN THE WAR.

At the time the school was established twenty-six years ago, it was believed that the graduates would be a valuable reserve upon which the Navy Department could call for officers in time of war, and that this belief was well-founded was clearly demonstrated in 1898 during the Spanish-American war. It is again proving true in the present war. Many graduates have volunteered for duty in the Navy, others are serving on board American merchant vessels, and a large number are officers on board ships sailing in European waters. The work that they are doing at the present time, both in the merchant service and in the Navy, is well maintaining the excellent record already established.

#### NAUTICAL SCHOOLS IN OTHER STATES.

The work of nautical education, which has heretofore been maintained only in the States of Massachusetts, New York and Pennsylvania, is now being planned by other Commonwealths. A number of States privileged under the Federal statutes of June 30, 1874, as amended on March 4, 1911, are preparing to enter upon this work. Early in 1917 the State of Washington enacted a law providing for the establishment of a nautical school at Seattle, to be known as the Washington State Nautical School; and the State of California has enacted a law establishing a nautical school in that State, probably at San Francisco. These two Pacific coast schools will follow closely the organization and methods of the Massachusetts School. In Virginia and in New Jersey initial steps have been taken looking to the establishment of similar nautical schools.

## THE AMERICAN MERCHANT MARINE.

A marked improvement has taken place in the American merchant marine during the past twenty-five years. Shipping conditions to-day are in striking contrast to the unfavorable conditions prevailing in the year 1895 when the first graduates were sent out from the school. In 1893 and 1894, the first and second year of the operation of the school, American tonnage showed a decrease. In those days the United States had practically no foreign tonnage; the American flag was seldom seen in the ports of Europe, South America and Asia, and there were very few opportunities for the graduate who desired to sail on a deep-sea voyage. To-day American ships are sailing in large numbers to European, South American and Asiatic ports. In 1895 American tonnage of all kinds totaled 4,635,000 tons; it is estimated that during the next twelve months the government will launch ships suitable for the foreign trade totaling 4,000,000 tons. To-day our entire country is largely concerned in building up a large ocean-going fleet. Young men with an inclination for a seafaring life can follow their natural bent with an ambitious confidence in a promising future for American shipping.

## SUPERINTENDENT'S REPORT.

Following is the report of Capt. P. W. Hourigan, U. S. N., superintendent of the school: —

The cruising field of the ship was restricted, as during the previous two summers, owing to the war. In fact, it was deemed advisable to omit the former cruise to the West Indies as the conditions at sea were somewhat uncertain, even though the risk was small. This resulted in further narrowing the scope of the work; the benefits to be gained from long periods of off-shore cruising were lacking, but, on the other hand, greater attention could be given, and was given, to the elements which were made available. A regular daily routine of drills and exercises was established, including afternoon instruction and school, which was rarely interrupted. When underweigh, regular watches were carried on with the attendant routine.

Occasion was taken to run at night where it was not strictly necessary, and in foggy weather to give practice and opportunity to observe the methods under these conditions. The older cadets were given the most responsible duties consistent with the safety of the ship, such as actually



taking charge of the watch by day; laying down, steering and checking up their own courses, etc. There was at all times a cadet officer of the watch when underweigh, and he was required, under the general observation of the regular officer of the watch, to carry on. All acquitted themselves very creditably.

The conduct of the cadets, both when on shore liberty and on board, was generally excellent. They were universally prompt in returning aboard. On shore they presented a smart appearance, upon which many people in the various places visited took occasion to comment most favorably. This was particularly true of the places frequently visited and where the cadets became familiarly known.

As shown in the itinerary appended, the ship after her usual spring overhauling sailed from Boston on April 25 and returned on September 12. The limits of the cruise were the western end of Long Island Sound and Bar Harbor, Me.; the total distance covered in the direct runs was about 2,500 miles; in addition, the ship on frequent occasions, as reported in detail at various times, made cruises in and out of port and digressed en route from port to port to carry on exercises.

Owing to the confined waters but little opportunity was presented for the use of canvas. Sail exercises were held, however, to give cadets some familiarity with the use of sail, which it is possible may at some time be useful to them.

All provisions and supplies were higher in price than last year, so that careful economy in expenditures had to be constantly exercised.

In the withdrawal from the staff of the ship of the Naval Reserve officers the efficiency of the school was at one time seriously threatened, but three graduates, Mr. J. W. Thompson, Mr. Edward Smith and Mr. Frederick W. Farquhar offered their services (at a very considerable sacrifice), so that the work, though a little shorthanded, did not materially suffer.

Before sailing there was installed on board, by order of the Navy Department, the ship's battery of four 6-pounders with their service ammunition; the ship was also painted the regulation Navy gray, "war color." This gave to the ship a new dignity and brought about a feeling (valuable to be inculcated in youth at this time) of being part of the war establishment. Sub-caliber practice was held on several occasions and "general quarters" was added to our regular exercises. When cruising out of enclosed waters extra lookouts were stationed at all times, the battery kept manned, and ammunition on deck, — practice in preparedness and readiness for the cadets.

The following summarizes the general instruction in each department, as reported by the respective heads.

#### SEAMANSHIP.

The exercises in boats under oars and under sail were carried on throughout the cruise; only oars were used until each cadet could pull a good oar. Then instruction under sail was taken up, developing many good boat

sailors and a fair amount of proficiency in all. Cadets were also encouraged in making use of the boats for their own pleasure, sailing, fishing, etc. All routine running trips were, as a rule, made by the pulling boats, the motor boat being reserved for special occasions.

A new 30-foot motor boat (standard Navy) was furnished the ship at the Portsmouth Navy Yard in place of the former one which was old and unsatisfactory. A new 24-foot motor sailer is now awaiting us at the Boston Navy Yard; this will take the place of a 28-foot cutter. These will afford excellent practice in handling this type of boat, now so much in use.

Instruction in handling heavy anchors and in warping the ship was given on two occasions, — once to shift the berth in Nantucket and once in warping alongside at New London.

The ship was moored on several occasions both with and without the mooring swivel. The frequent anchoring and getting underweigh, with the incidental foul anchor, gave ample instruction in handling ground tackle.

The "emergency" exercises of fire, collision, abandon ship, and man overboard were regularly carried on.

At all times, at anchor and underweigh, the regular ship duties were carried on by the cadets and all the ship's work done almost entirely by them (there were no mates and but three seamen in the crew). This embraced everything in the ship's daily life, — duties of officers, lookouts, leads, life boats, bridge navigation, care of ship, etc.

The winter's work in knotting and splicing, sailmaking, etc., was continued at every opportunity.

#### NAVIGATION.

At sea, off the New England coast and even in certain reaches of the Nantucket and Long Island sounds there were accorded opportunities at times to obtain altitudes of the sun and stars from which lines of position were obtained, either by the Sumner method of assuming two latitudes or the more advantageous method of Marc St. Hilaire. One feature of this inland nautical astronomy was that islands or headlands would sometimes intervene and the cadets would have to operate their sextants quickly or the sea horizon would be lost. "Catching the sun" under these conditions required the same skill and speed in operating the sextant as in obtaining altitudes of the sun or stars through the clouds at sea, and the results clearly showed that the cadets were well grounded.

While the deep-sea navigation suffered from confining the ship to limited coastal waters, nevertheless the handling of the ship in pilot waters, that most highly important branch of ocean navigation, has received excellent attention. Not only did the cadets receive classroom instruction in the system of buoyage, use of charts, sailing directions, tide tables, three-armed protractor, together with a thorough drilling in the use of the lead, log and lookout, but they had an excellent chance to use all those principles in operation. There was not an hour of the time from anchorage to anchorage that some one was not receiving practical instruction in piloting,



either in class or in line of duty as officer of the deck, helmsman or leadsmen. The nature of the waters lent opportunities for practical instruction in the buoy system. The lighthouses and headlands offered means for the practical demonstration of the use of cross bearings and the three-armed protractor. The prevalence of much fog was the means of acquiring a good idea of the extra precautions taken to insure the safety of the ship under those conditions.

Owing to shoal water the sounding machine was not used as often as in other years, but the hand leads were in constant use.

In port the second and third class cadets received class instruction in the use of the various nautical instruments and their care, keeping the log, working dead reckoning, pilot rules, rules of the road, aids to navigation, buoy systems, etc. This, in conjunction with practical work in piloting during the short runs between anchorages, was an unusual opportunity to combine practical and theoretical coast navigation.

#### MEDICAL.

The general condition of the health of cadets has been excellent during the entire cruise.

Comparative measurements of weight, height and chest expansion show the following: —

	May 26.	September 8.
Average weight, . . . . .	139.21 pounds.	146.6 pounds.
Average height, . . . . .	5 feet 7.6 inches.	5 feet 7.8 inches.
Average chest expansion, . . . . .	2.42 inches.	2.75 inches.

This gives an average increase of 7.39 pounds in weight, .2 of an inch in height and .33 of an inch in expansion.

All cadets were vaccinated during the preliminary cruise.

During the months of May and June each cadet received three inoculations of antityphoid serum, with no untoward result in any case.

Instruction in first aid was given as occasion permitted during the entire summer cruise.

#### STEAM.

Senior cadets were instructed in firing, water-tending, oiling, operation of main and auxiliary machinery, scraping in, taking leads off and taking up lost motion in bearings of same, finding dead center of valve setting, inspection, care and preservation of boilers and testing of water in same, examination of and testing for leaky condenser, examination, overhaul and repairs of steam and water ends of pumps, taking indicator diagrams and checking same for defects; also finding indicated horsepower and coal and water consumption per horsepower from same; safety valve

setting, propeller, coal consumption and power problems, — questions likely to be asked by steamboat inspectors from third assistant to chief engineer.

Junior cadets were instructed in coal passing, firing, uses of firing tools and boiler fittings, care and preservation of hull.

#### ELECTRICITY.

First and second class nautical cadets were given instruction and practice in the use of Continental Morse Code for night signaling, each cadet being required to qualify in sending and receiving by sight and sound.

The engineer cadets were given instruction in the various types of construction of armatures and field magnets of dynamos, faults and remedies, direct and alternating current systems, repairs to and care of the ship's electrical plant.

Under the supervision of the electrician each cadet was assigned full charge of the ship's electrical apparatus, being required to tend the starting, shifting load and stopping dynamos and to make the necessary repairs to dynamos, motors, lights, call bells, primary and secondary batteries.

Parts of lighting circuits were overhauled, removed and new circuits installed, the cadets being required to do the work as far as possible. Cadets were selected for radio instruction, passing the government examination for license at the end of the winter term and summer cruise. Members of the radio detail were assigned to regular radio watch at sea, keeping a record of calls and communications heard, and assisted in the care and upkeep of the set, making repairs as found necessary.

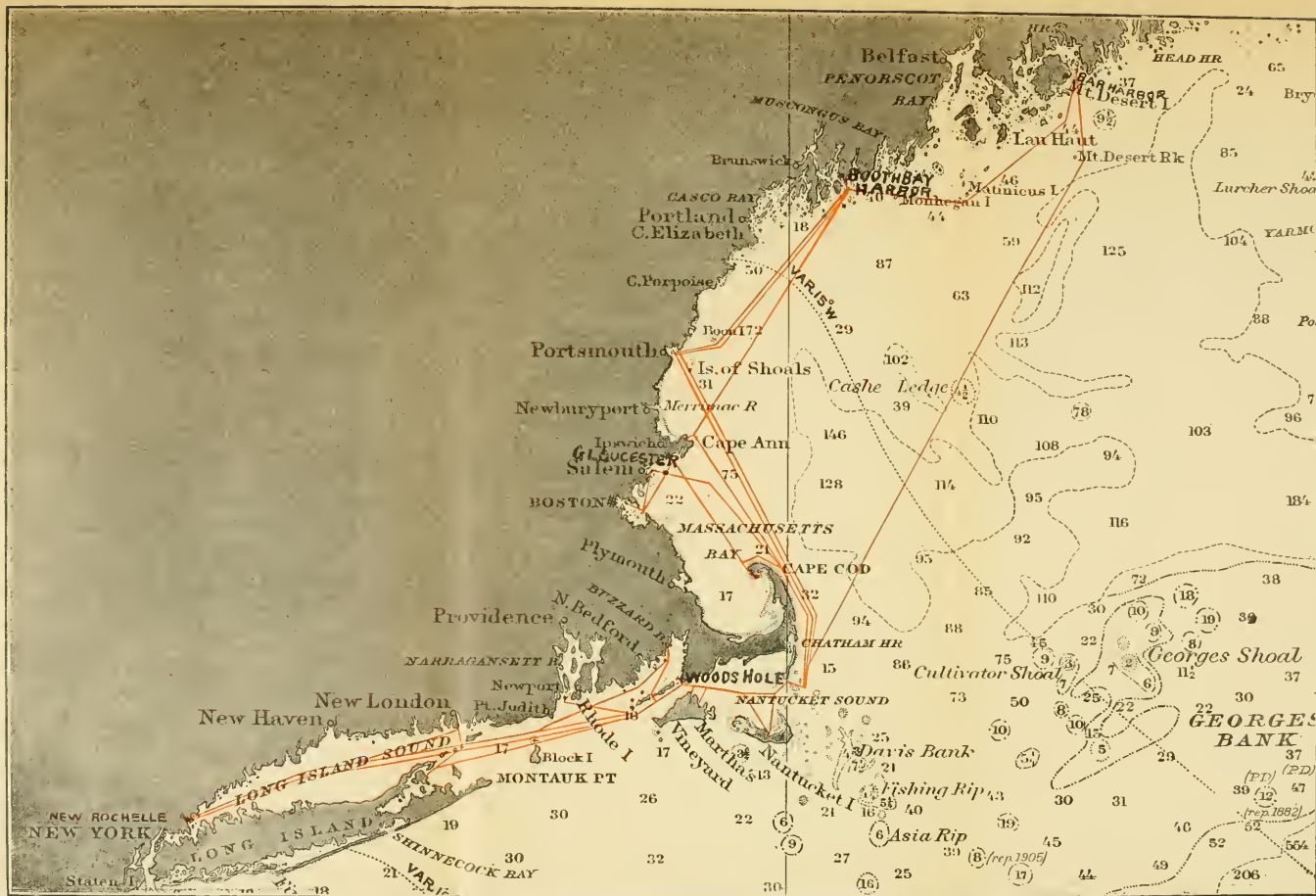
#### ORDNANCE.

"General quarters," *i.e.*, exercise of the battery, with the attendant ammunition supply: stations were held weekly, together with pointing and aiming instruction, "spotting," etc., which served to illustrate the uses of the ship's armament. On two occasions sub-caliber practice was held at anchor, a small float with miniature target anchored 400 yards distant being used.

In "small arms" the routine instruction was given, and on several occasions the company of cadets landed for drill in "extended order" maneuvers. The first class was landed for rifle firing practice at 200 yards and pistol (Navy automatic) practice at 50 yards. It was intended to carry on more of this practice but range facilities were lacking in the ports visited.

## ITINERARY.

PORTS.	Distance (Miles).	Left.	Arrived.
Boston-Gloucester, . . . . .	27.0	Apr. 25	Apr. 25
Gloucester-Marblehead, . . . . .	11.8	Apr. 26	Apr. 26
Marblehead-Gloucester, . . . . .	12.0	Apr. 27	Apr. 27
Gloucester-Provincetown, . . . . .	48.7	May 1	May 1
Provincetown-Woods Hole, . . . . .	92.0	May 2	May 2
Woods Hole-New London, Conn., . . . . .	86.0	May 4	May 4
New London-Orient Harbor, L. I., . . . . .	21.8	May 7	May 7
Orient Harbor-Woods Hole, . . . . .	84.8	May 8	May 9
Woods Hole-Edgartown, . . . . .	35.3	May 16	May 16
Edgartown-Vineyard Haven, . . . . .	24.6	May 17	May 17
Vineyard Haven-Norwalk, Conn., . . . . .	130.4	May 18	May 18
Norwalk-New Rochelle, N. Y., . . . . .	26.0	May 19	May 19
New Rochelle-New London, Conn., . . . . .	89.3	May 21	May 21
New London-Woods Hole, . . . . .	78.0	May 24	May 24
Woods Hole-Nantucket, . . . . .	35.2	May 28	May 28
Nantucket-Edgartown, . . . . .	25.0	June 4	June 4
Edgartown-Vineyard Haven, . . . . .	9.0	June 7	June 7
Vineyard Haven-Woods Hole, . . . . .	6.5	June 11	June 11
Woods Hole-Nantucket, . . . . .	32.5	June 18	June 18
Nantucket-Rockport, . . . . .	105.0	June 25	June 25
Rockport-Boothbay, Me., . . . . .	82.0	June 26	June 26
Boothbay-Portsmouth, N. H., . . . . .	73.0	June 29	June 29
Portsmouth-Nantucket, . . . . .	132.5	July 5	July 6
Nantucket-New Rochelle, N. Y., . . . . .	177.9	July 17	July 18
New Rochelle-New London, . . . . .	91.9	July 23	July 23
New London-Marion, . . . . .	76.0	July 26	July 26
Marion-Woods Hole, . . . . .	19.9	July 29	July 29
Woods Hole-Nantucket, . . . . .	31.0	July 30	July 30
Nantucket-Bar Harbor, Me., . . . . .	219.0	Aug. 6	Aug. 7
Bar Harbor-Boothbay, . . . . .	92.7	Aug. 10	Aug. 11
Boothbay-Portsmouth, N. H., . . . . .	73.4	Aug. 13	Aug. 14
Portsmouth-Nantucket, . . . . .	132.0	Aug. 20	Aug. 21
Nantucket-Vineyard Haven, . . . . .	29.0	Aug. 28	Aug. 28
Vineyard Haven-Newport, R. I., . . . . .	51.0	Aug. 29	Aug. 30
Newport-Woods Hole, . . . . .	41.0	Sept. 4	Sept. 4
Woods Hole-Edgartown, . . . . .	18.0	Sept. 5	Sept. 5
Edgartown-Nantucket, . . . . .	25.0	Sept. 6	Sept. 6
Nantucket-Marblehead, . . . . .	104.0	Sept. 10	Sept. 11
Marblehead-Boston, . . . . .	20.0	Sept. 12	Sept. 12
	2,470.2		



Route of the Massachusetts nautical training ship "Ranger," 1917. Length of cruise, 2,470 miles.



COAL REPORT.										Tons.
On hand and received,	.	.	.	.	.	.	.	.	.	586.3
Expended, . . . . .	.	.	.	.	.	.	.	.	.	490.7
										<hr/>
Remaining, . . . . .	.	.	.	.	.	.	.	.	.	95.6
Expended as follows: —										
Moving ship, . . . . .	.	.	.	.	.	.	.	.	.	193.3
Dynamos and other auxiliaries, . . . . .	.	.	.	.	.	.	.	.	.	215.7
Distilling, . . . . .	.	.	.	.	.	.	.	.	.	48.7
Heating, . . . . .	.	.	.	.	.	.	.	.	.	5.2
Galley, . . . . .	.	.	.	.	.	.	.	.	.	27.8
										<hr/>
Total expended, . . . . .	.	.	.	.	.	.	.	.	.	490.7

### THE WINTER TERM.

The winter term commenced on Oct. 15, 1917, with an enrollment of 112 cadets, the total number that could be accommodated on board the "Ranger." The ship is moored at the North End Park, Boston, the usual berth.

A course of lectures on appropriate subjects to supplement the regular studies is scheduled for delivery on board the "Ranger" on Wednesday evenings. Those so far provided are as follows: —

Capt. John A. Cook. Subject: Whaling in the Arctic Ocean.

Surgeon M. H. Foster, United States Public Health Service. Subject: Maritime Quarantine Regulations.

Capt. Eugene E. O'Donnell, Supervising Inspector, Fifth District. Subject: United States Steamboat Inspection Service.

Mr. Winthrop L. Marvin. Subject: The American Merchant Marine.

Assistant Naval Constructor Thomas B. Richey, U. S. N. Subject: Salvage Operations.

Assistant Naval Constructor Samuel J. Ziegler, U. S. N. Subject: Stability and Displacement.

Mr. Wilfred O. White. Subject: Compass Adjustment.

The following is the study schedule for the winter term of 1917-18: —







## OFFICERS AND INSTRUCTORS OF THE SCHOOL.

The following are the officers and instructors now connected with the school: —

Superintendent and commanding officer, Capt. P. W. Hourigan, U. S. N.  
Executive officer, Lieut. James O. Porter, U. S. N. R. F.  
Navigator, Mr. Edward Smith (graduate M. N. S.).  
First Lieutenant and instructor, Chief Boatswain Ernest V. Sandstrom, U. S. N.  
Watch officer, Chief Boatswain, Nicolai Sivertsen, U. S. N. R. F.  
Watch officer, John W. Thompson (graduate M. N. S.).  
Chief engineer, Machinist John O'Neill, U. S. N.  
Medical officer, Irvine L. Nowlan, M.D.  
Paymaster and captain's clerk, Adolph E. Salsburg.  
Electrician, Frederick W. Farquhar (graduate M. N. S.).

## PERSONNEL.

July 1, 1917, William E. McKay of Milton reappointed a commissioner.

March 28, 1917, Russell C. Damon appointed watch officer.

April 14, 1917, Frank H. Nelson appointed watch officer.

April 15, 1917, Charles A. Scott, electrician, resigned.

April 24, 1917, Lieut. Thalbert N. Alford, U. S. N., executive officer, detached.

May 24, 1917, A. Russell Cushing, navigator, resigned.

May 29, 1917, Frank H. Nelson, watch officer, resigned.

May 29, 1917, Russell C. Damon, watch officer, resigned.

May 30, 1917, Albert L. Ware, watch officer, resigned.

May 30, 1917, Ernest V. Wyatt appointed assistant instructor.

May 30, 1917, Harry Levine appointed assistant instructor.

June 1, 1917, Chief Boatswain Ernest V. Sandstrom, U. S. N., watch officer, rated executive officer.

June 1, 1917, Chief Boatswain Nicolai Sivertsen, U. S. N. R. F., rated watch officer.

June 19, 1917, Edward Smith appointed navigator.

June 20, 1917, Dr. Irvine L. Nowlan appointed surgeon.

June 21, 1917, Dr. Gardner N. Cobb, surgeon, granted leave of absence.

July 2, 1917, John W. Thompson appointed watch officer.

July 16, 1917, Frederick W. Farquhar appointed assistant engineer and electrician.

July 25, 1917, Harry Levine, assistant instructor, resigned.

September 13, 1917, Ernest V. Wyatt, assistant instructor, resigned.

Oct. 11, 1917, Chief Boatswain Ernest V. Sandstrom, U. S. N., rated first lieutenant and instructor.

Oct. 11, 1917, Lieut. James O. Porter, U. S. N. R. F., appointed executive officer.

### MEMBERSHIP OF THE SCHOOL.

#### *Graduating Class, March, 1917.*

Boyd, Dwight W.,	.	.	.	.	.	.	Randolph.
Crosbie, Percy A.,	.	.	.	.	.	.	Everett.
Dennen, Charles R.,	.	.	.	.	.	.	Gloucester.
Foy, John T.,	.	.	.	.	.	.	Bridgewater.
Francis, Earl S.,	.	.	.	.	.	.	Athol.
James, Herbert A.,	.	.	.	.	.	.	Sherborn.
Jensen, Ernest C.,	.	.	.	.	.	.	Provincetown.
Kingsbury, Luther C.,	.	.	.	.	.	.	Wellesley Hills.
Moore, Frank M.,	.	.	.	.	.	.	Forest Hills.
Nichols, Philip G.,	.	.	.	.	.	.	Peabody.
Preston, William M.,	.	.	.	.	.	.	Beverly.
Sheridan, Robert H.,	.	.	.	.	.	.	Stoneham.

#### *Graduating Class, September, 1917.*

Atwood, Franklin B.,	.	.	.	.	.	.	Nantucket.
Barton, Alan R.,	.	.	.	.	.	.	Winthrop.
Borden, Alton E.,	.	.	.	.	.	.	Fall River.
Freeman, Ivan,	.	.	.	.	.	.	East Orleans.
Huffman, Charles F.,	.	.	.	.	.	.	Waltham.
Levine, Harry,	.	.	.	.	.	.	Cambridge.
Little, Philip H.,	.	.	.	.	.	.	Holbrook.
MacLaughlin, Sydney L.,	.	.	.	.	.	.	Wollaston.
MacWhinnie, Donald,	.	.	.	.	.	.	New Bedford.
Massey, Arthur,	.	.	.	.	.	.	Lawrence.
McGourty, James A.,	.	.	.	.	.	.	Worcester.
McLaren, David M.,	.	.	.	.	.	.	Dedham.
Murphy, Arthur D.,	.	.	.	.	.	.	Beverly.
Noonan, John D.,	.	.	.	.	.	.	Mansfield.
Phelan, Arthur S.,	.	.	.	.	.	.	East Lynn.
Plummer, Kenneth H.,	.	.	.	.	.	.	Roxbury.
Raby, Ernest E.,	.	.	.	.	.	.	North Easton.

Roberts, Stanley F.,	Springfield.
Rowe, A. Henry,	Roslindale.
Storey, William W.,	Stoneham.
Susmann, Herbert W.,	Dorchester.
Thresher, Russell W.,	Southbridge.
Wilson, Bradford S.,	Quincy.
Wyatt, Ernest V.,	Boston.

*Class to Graduate, March, 1918.*

Anderson, Robert P.,	Melrose.
Blair, Andrew C., Jr.,	Fall River.
Carden, John R.,	Haverhill.
Clark, Wesley C.,	Arlington Heights.
Crowley, James J., Jr.,	North Abington.
Cunningham, George M.,	Lawrence.
Dean, Ira D.,	South Natick.
Donlin, John R.,	Medford.
Evers, Ralph A.,	Medford.
Fitzgerald, William H.,	Revere.
Freeman, Joseph,	Revere.
Glines, Edgar G.,	Beverly.
Hill, Raphael W.,	Provincetown.
Hovland, Almer T.,	Newton Lower Falls.
Hurld, Bernard F.,	Stoneham.
Lowry, James H.,	Canton.
Mackie, Gordon C.,	Brookline.
McKenzie, James C.,	Roxbury.
Newman, Karl W.,	Brockton.
Perry, Frank V., Jr.,	Provincetown.
Popkin, Jacob I.,	Malden.
Roswall, Clifford,	Medford.
Smith, John E.,	Stoneham.
Strout, Alden L.,	Boston.
Woods, Wilbur W.,	Provincetown.
Wright, Laurence A.,	Falmouth.

*Class to Graduate, September, 1918.*

Abbott, Raymond P.,	Newburyport.
Anderson, Alexander G.,	Dorchester.
Caswell, Leonard N.,	Fall River.
Colson, Stuart R.,	Whitman.
Damon, Harold S.,	Plymouth.
Distelman, Max,	Newburyport.
Easton, Francis J.,	Randolph.
Ford, Edward J.,	Wakefield.

Fraser, James E.,	Boston.
Gibbs, Arthur B.,	Nantucket.
Heaney, James R.,	Lynn.
Hoffses, Hartley,	Quincy.
Johnson, Louis H.,	Medford.
Kelly, Elmer J.,	Springfield.
Lowey, LeRoy B.,	Woods Hole.
Moore, James R.,	East Lexington.
Reagh, William S.,	Cliftondale.
Sample, Raymond H.,	Montello.
Sanborn, Gerald K.,	Lawrence.
Saunders, Raymond E.,	Somerville.
Stevens, Paul A.,	Stoneham.
Stockbridge, George R.,	Wellesley.
Walen, Leonard C.,	Gloucester.

*Class to Graduate, March, 1919.*

Bailey, Warren L., Jr.,	Worcester.
Beatty, James F.,	Lowell.
Bossom, Charles F.,	Arlington.
Burnap, C. Cameron,	Lunenburg.
Carey, Walter E.,	Holyoke.
Cosgrove, Frank T.,	Worcester.
Couble, Frank J.,	Montello.
Cunningham, John D.,	Quincy.
DeLeskey, Frederick T.,	East Boston.
Donahoe, John W.,	Dorchester.
Fraser, Jack A.,	Medford.
Gardiner, Nelson E.,	West Fitchburg.
Hall, Roy D.,	Dennis.
Hanna, Guy M.,	Waltham.
Hopkins, Harry E.,	North Eastham.
Kenyon, Chesley L.,	Chester.
Littlefield, Gordon A.,	Cambridge.
Lord, Harry C.,	Springfield.
Moulton, William H.,	Bedford.
Nelson, Herbert A.,	West Newton.
O'Brien, Robert S.,	Malden.
O'Leary, Arthur,	South Boston.
Purdy, Paul E.,	Everett.
Reed, Sherman W.,	Dorchester.
Roberts, Llewellyn H.,	Arlington.
Sanford, Loran H.,	Watertown.
Scully, Charles B.,	Rockland.
Torrey, Charles W.,	Rockland.

Vincent, Rudolphus N., . . . . .	Vineyard Haven.
Walker, Albert E., . . . . .	Lawrence.
Wilkinson, Harold B., . . . . .	Lynn.

*Class to Graduate, September, 1919.*

Barrus, Adelburt, . . . . .	Edgartown.
Bemis, Edmond F., . . . . .	East Lynn.
Clements, George C., . . . . .	Lynn.
Cotter, Thomas F., Jr., . . . . .	Lawrence.
Cronin, Walter J., . . . . .	Somerville.
Cusolito, Dominik J., . . . . .	Somerville.
Flynn, John E., . . . . .	Salem.
Forsberg, George E., . . . . .	Worcester.
Gilman, Charles E., . . . . .	Somerville.
Gosselin, Joseph W., . . . . .	Nahant.
Harrington, Francis J., . . . . .	Revere.
Henderson, George A., . . . . .	Brighton.
Holmes, Carl W., . . . . .	North Easton.
Howe, Harry C., . . . . .	Stoneham.
Jenness, Walter W., . . . . .	Malden.
Longmore, Harold T., . . . . .	Stoneham.
Macintyre, Ronald G., . . . . .	Fall River.
Mahoney, John J., . . . . .	Revere.
McNulty, Richard R., . . . . .	Gloucester.
Mitchell, Charles B., . . . . .	Lawrence.
Morin, Edward H., . . . . .	Stoneham.
Morrill, Arthur G., . . . . .	Melrose.
Needham, Alfred A., . . . . .	Manchester.
Nickerson, Richard F., . . . . .	South Duxbury.
O'Leary, Stephen J., . . . . .	East Dedham.
Presson, Walter S., . . . . .	Malden.
Stickel, Chas. H., . . . . .	East Lynn.
Stone, Paul, . . . . .	Pigeon Cove.
Studley, William B., Jr., . . . . .	Fairhaven.
Smith, Harding, . . . . .	Nantucket.
Walcott, Roger N., . . . . .	Concord.
Waters, Ernest B., . . . . .	Nahant.

CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1917, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Withdrawn, dismissed, dropped.	Number connected with the School.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.		
1893,	138	-	138	-	-	-	29	-	29	24	138
1894,	42	21	63	-	-	-	26	17	43	18	156
1895,	33	38	71	19	19	38	6	6	12	6	156
1896,	35	39	74	20	17	37	16	15	31	17	174
1897,	32	41	73	20	21	41	10	10	20	9	165
1898,	42	57	99	15	25	40	12	14	26	23	194
1899,	34	45	79	11	12	23	24	17	41	11	184
1900,	28	50	78	14	36	50	9	12	21	14	186
1901,	34	37	71	11	18	29	8	12	20	16	172
1902,	32	58	90	16	22	38	16	18	34	13	197
1903,	34	32	66	17	14	31	10	15	25	17	178
1904, <sup>1</sup>	-	-	60	16	29	45	5	12	17	31	165
1905, <sup>1</sup>	-	-	65	10	10	20	-	-	9	13	137
1906, <sup>1</sup>	-	-	50	16	19	35	-	-	18	19	145
1907, <sup>1</sup>	-	-	60	10	15	25	-	-	17	26	133
1908, <sup>1</sup>	-	-	45	8	9	17	-	-	9	9	110
1909, <sup>1</sup>	-	-	81	14	22	36	-	-	7	16	156
1910, <sup>1</sup>	-	-	54	6	15	21	-	-	16	15	131
1911, <sup>1</sup>	-	-	69	20	23	43	-	-	7	18	168
1912, <sup>1</sup>	-	-	57	17	16	33	-	-	14	16	157
1913, <sup>1</sup>	-	-	79	21	19	40	-	-	20	8	174
1914, <sup>1</sup>	-	-	65	20	16	36	-	-	22	7	171
1915, <sup>1</sup>	-	-	70	26	19	45	-	-	18	11	176
1916, <sup>1</sup>	-	-	73	23	15	38	-	-	36	3	175
1917, <sup>1</sup>	-	-	69	25	11	36	-	-	16	3	167
Totals,	-	-	1,799	375	422	797	-	-	528	302	-

<sup>1</sup> Since 1904 the cadets have been unclassified during the first year of their course.

## REGISTER OF GRADUATES.

*Officers in the Merchant Marine.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1894	James E. Reardon, . .	Roxbury, . .	Captain, . .	"Moldegaard" (4,500 tons).
1895	Walter J. Healey, . .	Worcester, . .	Captain, . .	"Bayway" (5,083 tons).
1896	Henry R. Bodge, . .	Wollaston, . .	Captain, . .	"Northland" (3,282 tons).
1896	George R. Lauriat, . .	Medford, . .	Captain, . .	"Gen. J. M. Brannan."
1896	Wm. N. P. Baker, . .	Dorchester, . .	Captain, . .	"Mariana" (3,063 tons).
1897	Chas. W. Clift, . .	Whitman, . .	Captain, . .	"Gen. J. M. Schofield."
1897	Emery Rice, . .	Brighton, . .	Captain, . .	"Mongolia" (13,658 tons).
1897	Willis Howes, . .	So. Yarmouth, .	Captain, . .	"El Aguileia."
1899	Edw. G. Smith, . .	Boston, . .	Captain, . .	"Freeport."
1900	William B. Knight, . .	Hull, . .	Captain, . .	"Firwood."
1900	James S. Howes, . .	Woods Hole, . .	Captain, . .	"Essex" (3,018 tons).
1900	Jos. E. Gately, . .	Marlborough, .	Captain, . .	"Willehad" (4,761 tons).
1901	Robert W. Tucker, . .	Kendal Green, .	Captain, . .	"McClellan."
1903	Nicholas J. Kane, . .	Whitman, . .	Captain, . .	"Panaman" (6,649 tons).
1904	Edward C. Roberts, . .	No. Beverly, . .	Captain, . .	"Alliance" (4,016 tons).
1906	William H. Lee, . .	Roxbury, . .	Captain, . .	"Houston."
1907	Frederic A. Gainard, .	Chelsea, . .	Captain, . .	- -
1911	Eugene E. Miller, . .	East Saugus, . .	Captain, . .	"Wico."
1894	Albert L. Warner, . .	Wollaston, . .	First officer, .	"Edward Pierce."
1895	Geo. L. P. Covell, . .	Roxbury, . .	First officer, .	Inter-Island Steamship Company.
1899	Walter S. Lynch, . .	Chelsea, . .	First officer, .	"Kroonland."
1899	Richard T. Blackford, .	Marblehead, . .	First officer, .	"Daylite."
1900	Alfred M. Cummings, .	Worcester, . .	First officer, .	"Edith."
1901	John J. Coholan, . .	South Boston, .	First officer, .	"Jonancy."
1901	Chas. D. Harrington, .	Cambridge, . .	First officer, .	"Mascotte."
1902	Edwin J. Madden, . .	Everett, . .	First officer, .	"St. Louis."
1903	Mark Woodbury, . .	Townsend, . .	First officer, .	"Texan."
1903	Benj. O'Connell, . .	Peabody, . .	First officer, .	"Vigilancia."
1905	Harold H. Gridley, . .	Dorchester, . .	First officer, .	"John D. Archbold."
1911	Norris T. Ela, . .	East Douglas, .	First officer, .	"Augusta."
1897	Edwin F. Darling, . .	West Dennis, . .	Second officer, .	"Jonancy."
1902	Wm. M. Chisholm, . .	No. Attleborough, .	Second officer, .	- -
1904	Leslie G. Holmes, . .	East Whitman, .	Second officer, .	"Antilles."
1907	Frazier L. Sears, . .	East Dennis, . .	Second officer, .	Standard Oil Company.
1907	Elmer B. Small, . .	North Truro, . .	Second officer, .	"James McGee."



*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1909	Harold C. Cooper, . .	Worcester, . .	Second officer, .	Standard Oil Com- pany.
1910	Franklin K. Tyler, . .	Beachmont, . .	Second officer, .	"Saramacca."
1911	Wesley F. Besse, . .	South Hanson, .	Second officer, .	"F. Q. Barstow."
1912	Herbert A. Burns, . .	New Bedford, .	Second officer, .	"Glenpool."
1912	Jos. M. Daniel, . .	Osterville, . .	Second officer, .	"Albert Watts."
1913	Arthur G. Burt, . .	Whitman, . .	Second officer, .	"Brazos."
1913	Kenneth E. Cahoon, .	W. Tisbury, . .	Second officer, .	"F. Q. Barstow."
1913	Wilfred H. Senior, . .	Boston, . .	Second officer, .	"Erny."
1914	Samuel A. Gates, . .	Malden, . .	Second officer, .	"Panaman."
1915	Albert V. Jones, . .	Fall River, . .	Second officer, .	"Cricket."
1915	Harold F. Craven, . .	Lawrence, . .	Second officer, .	"Currier."
1915	Chas. H. Hurley, . .	Westminster, .	Second officer, .	"Actaeon."
1915	Chas. E. Griffith, . .	No. Cambridge, .	Second officer, .	"Munabro."
1916	John A. Rylander, . .	Springfield, . .	Second officer, .	"Buenaventura."
1916	Peter J. Jakmauh, . .	South Boston, .	Second officer, .	- -
1907	Herbert Garity, . .	Boston, . .	Third officer, .	"Carolyn."
1913	Philip J. Fanning, . .	Needham, . .	Third officer, .	"Maracaibo."
1913	Everett O. Swinson, .	E. Gloucester, .	Third officer, .	"Allianca."
1914	David Swinson, . .	E. Gloucester, .	Third officer, .	Panama Line.
1915	Arthur A. Hovgaard, .	Brookline, . .	Third officer, .	"Chas. Braley."
1915	Ronald B. Ford, . .	Lawrence, . .	Third officer, .	"Orion."
1916	Richard Dunphe, . .	Elmwood, . .	Third officer, .	"Lewis Lucken- bach."
1916	Paul H. Browne, . .	Roslindale, . .	Third officer, .	"Camfield."
1916	Arthur J. Kenney, . .	Brookline, . .	Third officer, .	"Texan."
1916	Chas. A. Martell, . .	Somerville, . .	Third officer, .	"Shoshone."
1917	Luther Kingsbury, . .	Wellesley, . .	Third officer, .	Crowell & Thurlow Company.
1917	Alan R. Barton, . .	Winthrop, . .	Third officer, .	"Gulfstream."
1917	Russell W. Thresher, .	Southbridge, . .	Third officer, .	"New York."
1917	Ernest V. Wyatt, . .	Boston, . .	Third officer, .	"O. P. Jennings."
1917	William W. Storey, . .	Stoneham, . .	Third officer, .	"San Mateo."
1917	Stanley F. Roberts, . .	Springfield, . .	Third officer, .	- -
1917	Arthur S. Phelan, . .	Lynn, . .	Third officer, .	"Northern Bridge."
1911	Geo. L. E. Johnson, . .	Worcester, . .	Fourth officer, .	"New York."
1898	Eldon G. Freeman, . .	Whitman, . .	Bar pilot, . .	San Francisco.
1900	I. Clarence Bailey, . .	Kingston, . .	Pilot, . .	Boston Pilot Boat.
1895	Charles H. Lincoln, . .	Gloucester, . .	Marine surveyor, .	- -
1895	Michael D. Sullivan, .	Boston, . .	Chief engineer, .	"Rosecrans."

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1897	Augustus T. Holmes, .	Ipswich, .	Chief engineer, .	"J. M. Guffey" (2,520 tons).
1897	Edw. J. Cogan, .	Lynn, .	Chief engineer, .	- -
1897	Charles E. Rowe, .	Lynn, .	Chief engineer, .	- -
1898	John C. Ganzer, .	Jamaica Plain, .	Chief engineer, .	"Caribbean" (2,800 tons).
1898	William E. Ballsdon, .	Neponset, .	Chief engineer, .	"Herman Winter" (2,625 tons).
1898	Wilbur S. Lamont, .	Leominster, .	Chief engineer, .	Panama Canal.
1900	Hollis M. Cornwall, .	Melrose, .	Chief engineer, .	"Persian" (2,677 tons).
1900	Norris Sibley, .	Worcester, .	Chief engineer, .	"Col. Wikoff."
1900	William Glover, .	Wilmington, .	Chief engineer, .	"J. H. Devereaux."
1900	Elmer P. Butterworth, .	Foxborough, .	Chief engineer, .	"Gulfcoast" (5,188 tons).
1901	David W. Warren, .	Everett, .	Chief engineer, .	"Mielero."
1901	Daniel F. Butler, .	North Easton, .	Chief engineer, .	"Gloria."
1904	Chas. W. Bumpus, .	Wakefield, .	Chief engineer, .	"City of Gloucester."
1904	Cecil L. McIntyre, .	Upton, .	Chief engineer, .	- -
1905	Walter C. Lockhart, .	Wakefield, .	Chief engineer, .	- -
1905	Chas. F. Tarr, .	Taunton, .	Chief engineer, .	"Liebenfels" (4,525 tons).
1910	Leslie S. Badger, .	Somerville, .	Chief engineer, .	"N. Hayden."
1910	Geo. W. Sibley, .	Worcester, .	Chief engineer, .	"Transportation" (4,015 tons).
1911	Robert F. Phinney, .	Roslindale, .	Chief engineer, .	"Matinicoek" (6,766 tons).
1896	Forrest H. McIntyre, .	Gloucester, .	First assistant engineer.	"Daniel Millard."
1899	Frank P. Killion, .	Malden, .	First assistant engineer.	"Mauna Loa."
1900	J. J. Donohue, .	Cambridge, .	First assistant engineer.	"Oregon."
1900	James F. Rawdon, .	Worcester, .	First assistant engineer.	"Tuscan."
1903	Edmund E. Powers, .	Cambridgeport, .	First assistant engineer.	"Mongolia."
1904	Edw. J. Chadbourne, .	Reading, .	First assistant engineer.	"Henry F. Dimock."
1905	Thomas W. Chisholm, .	No. Billerica, .	First assistant engineer.	- -
1908	Geo. H. Cameron, .	Wakefield, .	First assistant engineer.	"Owego."
1910	R. Wilbur Anderson, .	Mattapan, .	First assistant engineer.	"Massachusetts."
1914	Leslie T. Severance, .	Malden, .	First assistant engineer.	"Malden."
1895	Fred'k H. Stackpole, .	Hyde Park, .	Second assistant engineer.	"City of Brockton."
1896	John O. Sargent, .	Worcester, .	Second assistant engineer.	"St. Louis."
1897	Perley W. Kimpton, .	Somerville, .	Second assistant engineer.	"Shawmut."
1898	Arthur P. Stevens, .	Nantucket, .	Second assistant engineer.	"Ponce."
1900	Earle P. Marshall, .	North Easton, .	Second assistant engineer.	"Uruguay."
1902	Augustus W. Hart, .	North Truro, .	Second assistant engineer.	"Chippewa."
1906	Victor M. Foster, .	East Boston, .	Second assistant engineer.	"Newton."
1908	Arthur E. Whiton, .	Wakefield, .	Second assistant engineer.	"Norwood."

*Officers in the Merchant Marine — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1909	Leo A. Keating, . . .	Natick, . . .	Second assistant engineer.	"Esparta."
1911	Samuel D. White, . . .	Hyannisport, . . .	Second assistant engineer.	- -
1912	Richard K. O'Connell, . . .	North Easton, . . .	Second assistant engineer.	"Currier."
1912	Louis H. Racicot, . . .	Lowell, . . .	Second assistant engineer.	"Ruth."
1913	Earle A. Lewis, . . .	Woods Hole, . . .	Second assistant engineer.	"Lampasas."
1913	Edward J. Fogarty, . . .	East Boston, . . .	Second assistant engineer.	"Ockenfels."
1914	Benj. H. Allen, Jr., . . .	Lawrence, . . .	Second assistant engineer.	"Vaterland."
1915	John Holmes, . . .	Campello, . . .	Second assistant engineer.	- -
1903	Rudolph Komenda, . . .	Somerville, . . .	Third assistant engineer.	"Hannibal."
1909	Fritz T. Kebler, . . .	Rochdale, . . .	Third assistant engineer.	"Onondaga."
1909	Richard K. Henry, . . .	Everett, . . .	Third assistant engineer.	"Everett."
1910	Chas. S. Hutchinson, . . .	Peabody, . . .	Third assistant engineer.	"Matinicoek."
1911	Patrick S. Coakley, . . .	Malden, . . .	Third assistant engineer.	- -
1912	Geo. R. Davison, . . .	Springfield, . . .	Third assistant engineer.	"Ancon."
1912	Walter L. Brewster, . . .	Somerville, . . .	Third assistant engineer.	"F. J. Lisman."
1913	Russell A. McLay, . . .	Lawrence, . . .	Third assistant engineer.	- -
1914	Arthur F. Higgins, . . .	Lawrence, . . .	Third assistant engineer.	"New York."
1915	Wilfred C. Herron, . . .	Lawrence, . . .	Third assistant engineer.	"Mexican."
1915	Mark E. Linehan, . . .	North Easton, . . .	Third assistant engineer.	- -
1915	Stanislaus P. J. Ciolkosz, . . .	Taunton, . . .	Third assistant engineer.	- -
1915	Philip J. Durney, . . .	Gloucester, . . .	Third assistant engineer.	"Meteor."
1915	Bernhardt Gerecke, . . .	Boston, . . .	Third assistant engineer.	"Altamaha."
1915	Clarence E. Stevens, . . .	W. Barnstable, . . .	Third assistant engineer.	"Katahdin."
1916	Carleton G. Reed, . . .	Lexington, . . .	Third assistant engineer.	- -
1917	Arthur Massey, . . .	Lawrence, . . .	Third assistant engineer.	"Cubadist."

*Officers in the United States Navy.*

1898	Clarence E. Wood, . . .	Fall River, . . .	Lieutenant Commander.	U. S. Navy.
1907	Thomas Baxter, . . .	South Dennis, . . .	Lieutenant, . . .	U. S. Navy.
1910	Russell H. Sullivan, . . .	Westfield, . . .	Acting pay clerk,	U. S. S. "Balch."
1909	Robert F. Hines, . . .	East Boston, . . .	- -	U. S. S. "Wainwright."
1898	Herbert E. Fish, . . .	Mattapoisett, . . .	Chief machinist, . . .	Fore River Shipbuilding Company.
1896	William F. Gourville, . . .	Everett, . . .	Machinist, . . .	Navy Yard, Portsmouth, N. H.
1903	C. Allan Holbrook, . . .	Marlborough, . . .	Machinist, . . .	U. S. S. "Oregon."

*Officers in the United States Navy — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1909	Louis F. Jones, . .	Wollaston, .	Machinist, first class.	Navy Yard, Charlestown.
1911	Jerome W. Hill, . .	Chicopee, .	Warrant gunner, .	U. S. S. "Brutus."
1902	John F. Murphy, . .	Worcester, .	Gunner, . .	U.S.S. "Delaware."
1904	C. George Dyson, . .	Billerica, .	Electrical gunner,	U. S. S. "Arizona."
1910	Geo. F. Griswold, . .	Watertown, .	Gunner's mate, .	U. S. S. "Chester."
1906	William R. Dolan, . .	Worcester, .	Chief electrician,	U. S. S. "Patterson."
1905	Laurence G. Kelley, .	Taunton, .	Chief electrician,	U. S. S. "Jacob Jones."
1900	Hugh H. McDonagh, .	Worcester, .	Electrician, . .	U. S. S. "Cæsar."
1903	Fred S. Garland, . .	Randolph, .	Electrician, . .	U. S. S. "Alabama."
1903	Guy H. Hudson, . .	Somerville, .	Electrician, . .	U. S. S. "Alabama."
1906	Louis H. Houghton, .	Worcester, .	Electrician, . .	U. S. S. "Missouri."
1907	Eugene E. Chaney, .	Arlington, .	Electrician, . .	U. S. S. "North Dakota."
1907	Louis L. LaMontagne, .	Millers Falls, .	Electrician, . .	U. S. S. "Pilgrim."
1910	Howell S. Loundes, .	Worcester, .	Electrician, . .	U. S. S. "Georgia."
1911	Harvey M. Thorndike, .	Swampscott, .	Electrician, . .	U. S. S. "Nereus."
1911	Walter P. Lynn, . .	Beverly, .	Electrician, . .	U. S. S. "Birmingham."
1906	Carrol L. Morgan, . .	Beverly, .	Wireless electrician,	San Juan, P. R.

*Officers in the National Naval Volunteers.*

1906	Howard G. Copeland, .	Malden, .	Lieutenant Commander.	U. S. S. "Georgia."
1895	Wm. J. Fitzgerald, .	So. Boston, .	Lieutenant, .	- -
1906	Ernest J. Flannigan, .	Wakefield, .	Lieutenant, .	U.S.S. "Kearsarge."
1903	Edward J. Hogan, . .	Charlestown, .	Lieutenant, Eng.,	U. S. S. "Rodgers."

*Enrolled in the United States Naval Reserve Force.*

1897	Frederick A. Sparks, .	Provincetown, .	Lieutenant Commander.	U. S. S. "Machigonne."
1898	Carl E. A. Anderson, .	Roslindale, .	Lieutenant Commander.	U. S. S. "Oregonian."
1900	Charles E. Lowe, . .	Roxbury, .	Lieutenant Commander.	"Cacique."
1901	Theodore H. Bicknell, .	Melrose, .	Lieutenant Commander.	U. S. S. "Hewitt."
1902	Fred C. Seibert, . .	Greenfield, .	Lieutenant Commander.	U. S. S. "Solace."
1902	A. Russell Cushing, .	Dorchester, .	Lieutenant Commander.	Naval Training Station, Bumpkin Island.
1903	Harry M. Bostwick, .	Northbridge, .	Lieutenant Commander.	U.S.S. "Abarenda."
1903	Robert B. Powers, . .	Brockton, .	Lieutenant Commander.	U. S. S. "Ajax."

*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1907	William M. Gifford, .	Woods Hole, .	Lieutenant Com-	U. S. S. "Beau-
1908	Ernest F. Robinson, .	East Boston, .	mander. Com-	fort." U. S. S. "Nero."
1909	Eric E. Winquist, .	Jamaica Plain, .	mander. Com-	U. S. S. "Cuyama."
1909	Carroll E. Higgins, .	Somerville, .	mander. Com-	U. S. S. "Pennsyl-
1895	Edwin C. Bliss, .	New York, .	mander. Lieuten-	vanian." -
1896	James H. B. Meehan, .	Lowell, .	ant, .	U. S. S. "Proteus."
1897	Fred'k W. Jones, .	Winchester, .	Lieutenant, .	U. S. S. "Massachu-
1898	Louis E. Congdon, .	Boston, .	Lieutenant, .	setts." U. S. S. "Hisko."
1898	Everett S. Ransom, .	Mattapoisett, .	Lieutenant, .	U. S. S. "Parthe-
1901	Robert A. Patterson, .	Brighton, .	Lieutenant, .	nia." U. S. S. "Solace."
1901	Eugene I. K. Murphy, .	Worcester, .	Lieutenant, .	U. S. S. "Christa-
1902	Arthur T. Luther, .	Swansea, .	Lieutenant, .	bel." Mine Pilot, Panama
1902	Arthur Jensen, .	Provincetown, .	Lieutenant, .	Canal. U. S. S. "Savan-
1902	Louis G. Ruggles, .	Neponset, .	Lieutenant, .	nah." U. S. S. "Vulcan."
1903	Mark Woodbury, .	Townsend, .	Lieutenant, .	U. S. S. "Texan."
1903	Edw. A. Mercer, .	Cambridge, .	Lieutenant, .	U. S. S. "Nero."
1903	James S. McGarry, .	Shrewsbury, .	Lieutenant, .	U. S. S. "El Almi-
1904	Cyrus Barnes, .	Malden, .	Lieutenant, .	raute." -
1904	Andrew J. Iverson, .	Beverly, .	Lieutenant, .	Newport, R. I.
1905	Fred'k S. Walker, .	Dorchester, .	Lieutenant, .	U. S. S. "Malden."
1905	Fred G. Carleton, .	Maynard, .	Lieutenant, .	Commonwealth
1905	James A. Crocker, .	Nahant, .	Lieutenant, .	Pier. U. S. S. "Hewitt."
1906	William A. Manchester, .	Brockton, .	Lieutenant, .	U. S. S. "Solace."
1906	Augustus C. Caldwell, .	Dorchester, .	Lieutenant, .	U. S. S. "Ajax."
1906	Bradford N. A. Gladding, .	New Bedford, .	Lieutenant, .	U. S. S. "Bath."
1906	Arthur G. Burbank, .	Carver, .	Lieutenant, .	U. S. S. "Kanawha."
1907	Walter L. Smith, .	Ashburnham, .	Lieutenant, .	U. S. S. "Aborean."
1907	George H. Stickney, .	Worcester, .	Lieutenant, .	U. S. S. "Pensa-
1907	Harry L. Chick, .	Beverly, .	Lieutenant, .	cola." U. S. S. "Saturn."
1907	Archie E. Bragg, .	New Bedford, .	Lieutenant, .	U. S. S. "Saturn."
1908	Thos. B. Pellett, .	Worcester, .	Lieutenant, .	U. S. S. "Kanawha."
1908	Chester B. Mellen, .	Quincy, .	Lieutenant, .	U. S. S. "Tiger."
1908	Eugene P. Shevlin, .	East Boston, .	Lieutenant, .	U. S. S. "Tulip."
1908	Edw. S. Ells, .	Cambridge, .	Lieutenant, .	U. S. S. "Gold
1909	Robert S. Sparrow, .	Eastham, .	Lieutenant, .	Shell." U. S. S. "Dakotan."
1909	Samuel J. Miller, .	Fall River, .	Lieutenant, .	U. S. S. "Brutus."
1909	Everett B. Ward, .	Lynn, .	Lieutenant, .	U. S. S. "Celtic."



*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1911	Chas. C. Plummer,	Cambridge,	Lieutenant,	U. S. S. "Harvey H. Brown."
1911	Albert L. Ware,	Cambridge,	Lieutenant,	Naval Cadet School.
1911	Harold S. Dexter,	Mattapoisett,	Lieutenant,	U. S. S. "Vulcan."
1911	Raymond C. Vose,	Cambridge,	Lieutenant,	U. S. S. "Nereus."
1911	Fred'k J. Shaw,	Cambridge,	Lieutenant,	U. S. S. "Lakeview."
1911	Chas. F. Fornason,	Gloucester,	Lieutenant,	U. S. S. "Aphrodite."
1912	William A. Hamilton,	Cliftondale,	Lieutenant,	U. S. S. "Proteus."
1912	Alex. G. Perkins,	Newburyport,	Lieutenant,	U. S. S. "Achilles."
1912	Robert M. Gray,	Melrose,	Lieutenant,	"Wm. A. McKenney."
1912	Harold Ertel,	Longmeadow,	Lieutenant,	U. S. S. "Achilles."
1912	Ellenwood Folger,	Nantucket,	Lieutenant,	U. S. S. "Biddle."
1913	Borden A. Tuell,	New Bedford,	Lieutenant,	- -
1913	Ralph W. Dearborn,	Mansfield,	Lieutenant,	U. S. S. "Pennsylvanian."
1914	Edw. D. Newell,	Gloucester,	Lieutenant,	U. S. S. "Sterling."
1915	Herman S. Mayo,	Provincetown,	Lieutenant,	U. S. S. "Alaskan."
1915	William J. Bonner,	Dorchester,	Lieutenant,	U. S. S. "Cæsar."
1915	Chas. P. Jacobson,	Everett,	Lieutenant,	U. S. S. "Peter H. Crowell."
1916	Percy C. Stevens,	W. Barnstable,	Lieutenant,	U. S. S. "Edw. Pierce."
1895	Louis E. Burwell,	Somerville,	Ensign,	U. S. S. "Charleston."
1900	Ressie E. Bowser,	No. Abington,	Ensign,	U. S. S. "Nero."
1900	E. Newton Parker,	Greenfield,	Ensign,	- -
1902	Ernest L. Saunders,	Brockton,	Ensign,	U. S. S. "Justin."
1903	Philip C. Taisey,	Brighton,	Ensign,	U. S. S. "Mt. Vernon."
1905	Royal L. Barrows,	Boston,	Ensign,	U. S. S. "Bulgaria."
1906	Cassius E. Cushman,	Rockport,	Ensign,	U. S. S. "Maine."
1906	George C. Bosson,	Reading,	Ensign,	U. S. S. "Old Colony."
1907	Frederick M. Coughlan,	No. Dartmouth,	Ensign,	"Kroonland."
1907	Jos. R. Wier,	Saundersville,	Ensign,	U. S. S. "Nero."
1907	Don C. C. Lewis,	New Bedford,	Ensign,	U. S. S. "Nevada."
1909	William E. Caddigan,	Dorchester,	Ensign,	Commonwealth Pier.
1909	Ervin L. Kelley,	Medford,	Ensign,	U. S. S. "Azalea."
1910	Ernest B. Wyatt,	Wakefield,	Ensign,	U. S. S. "Vulcan."
1910	William Bowen,	Boston,	Ensign,	U. S. S. "Bunker Hill."
1911	George L. Lockhart,	Wakefield,	Ensign,	U. S. S. "Orion."
1911	Wm. M. Gorham,	Winthrop,	Ensign,	U. S. S. "Shawmut."
1911	Richard J. Routledge,	Needham,	Ensign,	Provincetown, Mass.

*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1911	Henry O. K. Hanson, .	Neponset, .	Ensign, . .	U. S. S. "Mt. Vernon."
1912	Ralph E. Merithew, .	Haverhill, .	Ensign, . .	U. S. S. "Bristol."
1912	Clarence L. Howard, .	Auburndale, .	Ensign, . .	U. S. S. "Sterling."
1912	John Marks, . . .	Gloucester, .	Ensign, . .	U. S. S. "Monticello."
1912	Albert W. Culley, . .	Fitchburg, .	Ensign, . .	U. S. S. "Vulcan."
1912	Richard J. Cavanaugh, .	New Bedford, .	Ensign, . .	U. S. S. "Antilla."
1913	Nils J. Peterson, . .	Brookton, .	Ensign, . .	U. S. S. "Proteus."
1913	Frank H. Nelson, . .	Fall River, .	Ensign, . .	- -
1913	Philip H. Waldron, . .	Westborough, .	Ensign, . .	- -
1913	Waldon A. McIntire, .	Gloucester, .	Ensign, . .	U. S. S. "Yacona."
1913	John A. Maddock, . .	Newburyport, .	Ensign, . .	U. S. S. "Ajax."
1913	Nelson T. Nutter, . .	Newburyport, .	Ensign, . .	U. S. S. "Jason."
1913	Gregory B. Nichols, .	Danvers, . .	Ensign, . .	U. S. S. "Limon."
1914	Ten Eyck H. Reed, .	So. Framingham, .	Ensign, . .	U. S. S. "Somerset."
1914	James A. Stowell, . .	Walpole, . .	Ensign, . .	U. S. S. "Santiago."
1914	Richard S. Tewksbury, .	Winthrop, .	Ensign, . .	U. S. S. "Wasaka."
1914	Samuel J. Lee, . . .	Roxbury, .	Ensign, . .	U. S. S. "Cæsar."
1914	Oliver P. Shattuck, .	South Acton, .	Ensign, . .	U. S. Naval Academy.
1914	F. Palmer Harrington, .	Malden, . .	Ensign, . .	- -
1914	Chas. P. Tucker, . .	Roxbury, .	Ensign, . .	U. S. S. "Orion."
1914	Arthur C. Goodwin, .	Cambridge, .	Ensign, . .	- -
1914	James A. Sweeney, . .	East Boston, .	Ensign, . .	U. S. S. "Utah."
1914	C. Harold Peterson, .	Norwood, .	Ensign, . .	U. S. S. "Proteus."
1915	Russell C. Damon, . .	Quincy, . .	Ensign, . .	- -
1915	Leland M. Marshall, .	Revere, . .	Ensign, . .	U. S. Naval Academy.
1915	Curtis C. Fales, . . .	Westborough, .	Ensign, . .	U. S. S. "Cuyama."
1915	Chas. N. Bamforth, .	So. Lincoln, .	Ensign, . .	U. S. S. "Californian."
1915	Earle D. Hammond, .	Mattapoissett, .	Ensign, . .	U. S. S. "Kentuckian."
1915	Ralph S. Moore, . . .	Newton, . .	Ensign, . .	U. S. S. "Montanan."
1915	Leif H. Konrad, . . .	Roxbury, .	Ensign, . .	U. S. S. "Sterling."
1915	Wm. C. Davenport, .	New Bedford, .	Ensign, . .	U. S. S. "St. Louis."
1916	William E. Lord, . . .	Springfield, .	Ensign, . .	U. S. S. "Dakotan."
1916	Randall F. Elder, . .	Everett, . .	Ensign, . .	- -
1916	Gerard R. Crosby, . .	Orleans, . .	Ensign, . .	U. S. S. "Minnesota."
1916	Frank M. Perrin, . . .	Worcester, .	Ensign, . .	U. S. S. "Mexican."
1916	J. Prescott Mahoney, .	W. Wareham, .	Ensign, . .	U. S. S. "Wanderer."
1916	Byron H. Paine, . . .	New Bedford, .	Ensign, . .	Newport, R. I.



*Enrolled in the United States Naval Reserve Force — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1917	Philip G. Nichols, . .	Peabody, . .	Midshipman, . .	U. S. Naval Academy.
1906	Raymond T. Gerrard, . .	Springfield, . .	Chief quartermaster.	- -
1917	Chas. R. Dennen, . .	Gloucester, . .	Chief quartermaster.	Commanding U. S. N. Signal Station.
1917	Percy A. Crosbie, . .	Everett, . .	Chief quartermaster.	"Reina Mercedes."
1917	Frank M. Moore, . .	Forest Hills, . .	Chief quartermaster.	Radio School, Cambridge.
1917	William M. Preston, . .	Beverly, . .	Chief quartermaster.	U. S. S. "Kanawha."
1911	Clifford Bailey, . .	Ludlow, . .	First class quartermaster.	- -
1915	Osgood R. Flagg, . .	Southborough, . .	First class quartermaster.	U. S. S. "Birmingham."
1916	Albert Bianchi, . .	Worcester, . .	First class quartermaster.	U. S. S. "Sterling"
1916	Howard U. Chase, . .	Nantucket, . .	Third class quartermaster.	U. S. S. "Jacob Jones."
1916	Harold S. Ireland, . .	Somerville, . .	Quartermaster, . .	- -
1916	Thomas B. Lufkin, . .	Gloucester, . .	Warrant boatswain,	- -
1909	S. Philip Grimshaw, . .	So. Dartmouth, . .	Chief boatswain's mate.	Fairhaven, Mass.
1910	Archibald W. Older, . .	Swampscott, . .	Chief boatswain's mate.	- -
1911	Roy A. Whittemore, . .	Malden, . .	Chief boatswain's mate.	- -
1912	Albert H. Acorn, Jr., . .	Quincy, . .	Chief boatswain's mate.	U. S. S. "Louise."
1913	John W. Crocker, . .	Nahant, . .	Chief boatswain's mate.	U. S. S. "Merimar."
1912	Harold L. Winslow, . .	Canton, . .	Boatswain's mate, second class.	U. S. S. "Nevada."
1913	Laurence E. Burns, . .	Winthrop, . .	Boatswain's mate, second class.	U. S. S. "Rodgers."
1916	Richard H. McKey, . .	Wonalancet, . .	- -	U. S. S. "Lamson."
1896	Harry L. Giles, . .	Everett, . .	Chief machinist's mate.	U. S. S. "Covington."
1913	Jos. D. Deneen, . .	New Bedford, . .	Chief machinist's mate.	U. S. S. "Ardent."
1904	Chas. H. Hill, . .	Reading, . .	Warrant machinist.	U. S. S. "Salem."
1914	Herbert T. Douglas, . .	Medford, . .	Warrant machinist.	- -
1916	C. Edwin Berglund, . .	Brockton, . .	Warrant machinist.	U. S. S. "Bunker Hill."
1917	James A. McGourty, . .	Worcester, . .	Warrant machinist.	U. S. S. "Lake-moor."
1903	Martin H. Greeley, . .	South Boston, . .	Machinist's mate, first class.	U. S. S. "Kittery."
1904	Benj. L. Welch, . .	Salem, . .	Machinist's mate, first class.	"Sadie Ross."
1916	Alex. J. Phillips, . .	Easton, . .	Machinist's mate, first class.	U. S. S. "Melville."
1916	Joseph A. Bain, . .	Lawrence, . .	Machinist's mate, first class.	- -
1916	Leo A. Benhard, . .	Springfield, . .	Machinist's mate, second class.	U. S. Armory, Springfield.
1916	Jos. P. Condrey, . .	Lowell, . .	Machinist's mate, third class.	U. S. S. "Birmingham."
1904	Chas. A. Hill, . .	Melrose, . .	Machinist's mate,	- -
1909	Frederick H. H. Sylvia, . .	Nantucket, . .	- -	U. S. S. "Ozark."
1904	Harold J. Dunn, . .	Canton, . .	Chief electrician,	U. S. S. "Kanawha."
1904	Leo W. Twombly, . .	Jamaica Plain, . .	Chief electrician,	Bumpkin Island.

*Officers in the United States Marine Corps.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1903	Leander A. Clapp, . .	Brockton, . .	Captain, . .	U. S. Marine Corps.
1906	Clarence E. Nutting, . .	Cambridge, . .	Captain, . .	U. S. Marine Corps.
1915	Edward R. Rhodes, . .	Lowell, . .	Captain, . .	U. S. Marine Corps.

*In the United States Army.*

1894	F. W. Galbraith, Jr., . .	Springfield, . .	Colonel, . .	Commanding 147th U. S. Inf.
1906	Chas. W. Hanes, . .	Melrose, . .	Lieutenant, . .	- -
1910	Paul Case, . .	Brockton, . .	- -	U. S. Army Hosp. No. 6, A. E. F.
1913	Firth B. Andrews, . .	Melrose, . .	- -	102d Mach. Gun Battalion.
1912	Richard K. O'Connell, . .	No. Easton, . .	Private, . .	Co. E, 301st Engineers.
1914	Wesley H. Burton, . .	Plainville, . .	Private, . .	101st Reg. U. S. Inf., A. E. F.
1911	Walter H. Blanchard, . .	Gloucester, . .	- -	101st Supply Train, 26th Div., A. E. F.
1915	Chas. Pope, . .	Springfield, . .	- -	146th F. A., U. S.
1901	Wm. R. Bolton, . .	Springfield, . .	Private, . .	Co. F, 112th U. S. Eng.
1913	Elmer D. Taggart, . .	Wakefield, . .	Private, . .	Camp Gordon, Atlanta, Ga.

*Officers in the United States Coast Guard Service.*

1895	Philip W. Lauriat, . .	Medford, . .	1st Lieutenant, . .	Purchasing officer, San Francisco.
1899	James A. Alger, . .	Reading, . .	1st Lieutenant, . .	Fourth Naval District.
1900	John F. McGourty, . .	Worcester, . .	2d Lieutenant, . .	"Tampa."
1906	William F. Towle, . .	Boston, . .	2d Lieutenant, . .	"Androscoggin."
1897	Lorenzo C. Farwell, . .	Dorchester, . .	1st Lieut., Eng., . .	Recruiting Office, New York City.
1897	Albert F. Patterson, . .	Townsend, . .	1st Lieut., Eng., . .	"Manning."
1898	John T. Carr, . .	Malden, . .	1st Lieut., Eng., . .	"Tampa."
1896	Webb S. Maglathlin, . .	Bridgewater, . .	2d Lieut., Eng., . .	"Snomish."
1906	Henry C. Roach, . .	New Bedford, . .	2d Lieut., Eng., . .	"Androscoggin."
1907	Paul R. Smith, . .	Concord, . .	3d Lieut., Eng., . .	"Tallapoosa."

*Ship Construction.*

1898	Jos. E. Sheedy, . .	Reading, . .	Assistant manager.	Seattle Shipbuilding Company.
1898	Geo. F. Waite, . .	Winthrop, . .	- -	American International Shipbuilding Company.

*Instructors.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1900	Edward Smith,	Wellesley,	Navigating officer,	"Ranger."
1900	Gershom Bradford,	Duxbury,	Navigating officer,	"Newport."
1902	Osborne E. McKay,	Provincetown,	Chief officer and instructor.	"Gov. Dingley."
1903	Fred'k W. Farquhar,	Lawrence,	Instructor in electricity.	"Ranger."
1912	John W. Thompson,	Marion,	Watch officer,	"Ranger."

*United States Steamboat Inspection Service.*

1896	Alvin W. Haynes,	Somerville,	Assistant inspector of hulls.	New York, N. Y.
1902	Herman T. Parker,	Rockport,	Assistant inspector of hulls.	Boston, Mass.
1909	William A. Sillars,	Danvers,	Assistant inspector of hulls.	Providence, R. I.
1899	Frank B. Davis,	Dorchester,	Assistant inspector of boilers.	New Orleans, La.

*Officers in the United States Lighthouse Service.*

1896	George E. Eaton,	Wakefield,	Captain,	"Anemone."
1904	John F. Williamson,	Brockton,	Captain,	"Lilac."
1905	Harry W. Maynard,	Winthrop,	First officer,	"Sumac."
1910	Chester R. Morris,	Springfield,	First officer,	"Lilac."

*In the Hydrographic Office, Navy Department.*

1896	Charles S. Young,	Boston,	Nautical expert,	U. S. Hydrographic Office.
1914	Joseph L. Turner,	Amherst,	Nautical expert,	U. S. Hydrographic Office.
1916	Harold R. Congdon,	Roxbury,	Nautical expert,	U. S. Hydrographic Office.

## APPROPRIATIONS.

The appropriations for the school for the fiscal year 1917, from Dec. 1, 1916, to Nov. 30, 1917, are here accounted for as follows:—

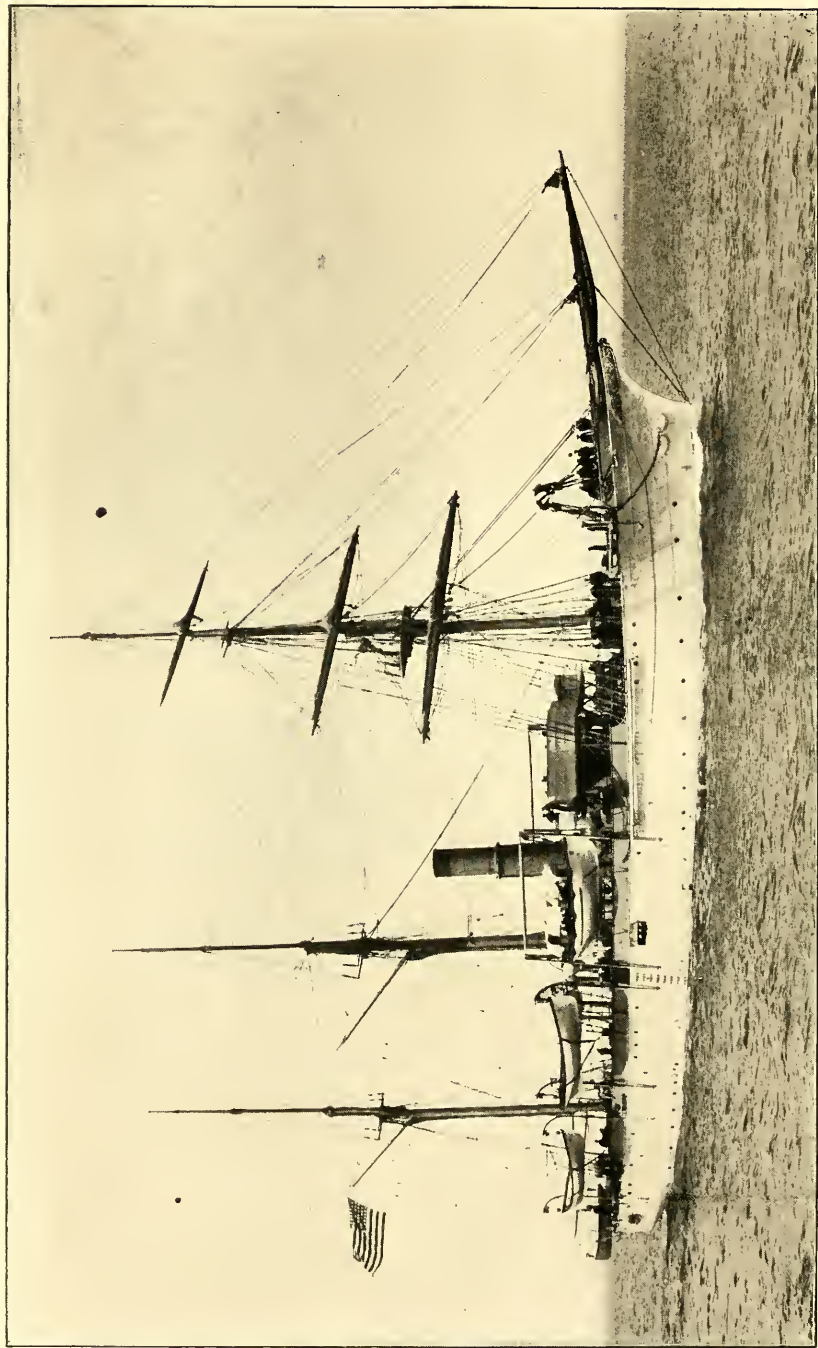
<i>Current Expenses.</i>	
Appropriation, . . . . .	\$67,000 00
Expended:—	
Pay roll, . . . . .	\$31,344 78
Provisions, . . . . .	20,923 35
Seamanship department, . . . . .	3,290 29
Engineering department . . . . .	6,742 55
Instruction, . . . . .	966 79
Miscellaneous, . . . . .	3,825 81
	<hr/>
Total amount expended, . . . . .	\$67,093 57
Less balance allowed from 1916, . . . . .	99 49
	<hr/>
	66,994 08
	<hr/>
Balance unexpended, . . . . .	\$5 92

<i>Office Expenses.</i>	
Appropriation, . . . . .	\$6,000 00
Expended:—	
Salaries, . . . . .	\$3,286 34
Rent of office, and janitor's service, . . . . .	1,098 67
Printing, . . . . .	581 59
Stationery and postage, . . . . .	399 49
Telephone and telegrams, . . . . .	204 60
Commissioners' expenses, . . . . .	19 85
Miscellaneous, . . . . .	411 52
	<hr/>
Total amount expended, . . . . .	\$6,002 06
Less amount allowed by Retirement Association, . . . . .	3 30
	<hr/>
	5,998 76
	<hr/>
Balance unexpended, . . . . .	\$1 24

Respectfully submitted,

FRANCIS T. BOWLES, *Chairman.*  
WILLIAM E. McKAY.  
CLARENCE E. PERKINS.





The "Ranger" leaving Boston on the Annual Summer Cruise.

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TWENTY-SEVENTH ANNUAL REPORT

OF

THE COMMISSIONERS

OF THE

MASSACHUSETTS NAUTICAL  
SCHOOL

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JANUARY 1, 1919



BOSTON  
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1919



PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL

2A PARK STREET, BOSTON

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FRANCIS T. BOWLES, *Chairman*  
WILLIAM E. MCKAY  
CLARENCE E. PERKINS

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WILLIAM H. DIMICK, *Secretary*



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# The Commonwealth of Massachusetts.

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The commissioners have the honor to submit their report of the operations of the school for the year 1918.

### THE COURSE OF INSTRUCTION AND THE DEMANDS UPON THE SCHOOL.

The Massachusetts Nautical School offers instruction in seamanship, navigation and marine engineering to the sons of citizens of the Commonwealth; graduates are qualified for service as deck and engineer officers in the American merchant marine. The school ship is the U. S. S. "Nantucket," a vessel loaned to the Commonwealth by the Navy Department. Students are admitted in the spring and autumn, and the course of instruction covers two years. The cadet's cost of clothing and books is \$130 the first year and \$25 the second year.

The work of the Massachusetts Nautical School in educating and training young men of the State for a seafaring life is essentially and efficiently helpful to the program of the American merchant marine, and the future is full of promise. Established twenty-seven years ago, improvements in equipment and in the courses of study have been made each year. The demand for nautical education such as this school provides is indicated by the fact that at the last semiannual examination to fill 26 vacancies there were 150 applicants. The school has for several years been unable to accommodate all the properly qualified applicants for admission.

## THE WORK MAINTAINED DURING THE WAR.

During the past eighteen months the urgent need of officers for the Navy and for the merchant service made it difficult to maintain the corps of instructors and officers on a normal basis. The "Nantucket" was assigned by the Navy Department to the First Naval District, and in July a heavier battery was installed on the ship; some of the officers were enrolled in the Naval Reserve Force; and the late summer cruise was restricted to the territorial waters of New England. Various other difficulties were created by war conditions. The successful continuation of the school under these circumstances is due largely to the naval officers serving successively as superintendents, — Capt. P. W. Hourigan and Commanders W. F. Low and C. N. Atwater, — who accomplished, through their tireless efforts, the opportune solution of many difficult situations.

The thanks of the school are due to Hon. Josephus Daniels, Secretary of the Navy, Rear Admiral Spencer S. Wood, U. S. N., commandant, First Naval District, and Capt. William R. Rush, U. S. N., commandant of the Boston Navy Yard, for courtesies extended and assistance rendered during the past year.

## THE SCHOOL RECORD.

During the past year there have been 178 students on the rolls of the school. They came from 74 cities and towns of the Commonwealth, as follows: —

Arlington Heights, . . . . .	1	East Dedham, . . . . .	1
Bedford, . . . . .	1	East Lexington, . . . . .	1
Beverly, . . . . .	3	Edgartown, . . . . .	1
Boston, . . . . .	19	Everett, . . . . .	4
Brockton, . . . . .	1	Fairhaven, . . . . .	1
Buzzards Bay, . . . . .	1	Fall River, . . . . .	5
Cambridge, . . . . .	4	Falmouth, . . . . .	2
Canton, . . . . .	1	Fitchburg, . . . . .	2
Chester, . . . . .	1	Gloucester, . . . . .	4
Cliftdale, . . . . .	1	Haverhill, . . . . .	1
Concord, . . . . .	1	Holyoke, . . . . .	1
Dennis, . . . . .	1	Lawrence, . . . . .	9
Duxbury, . . . . .	2	Lowell, . . . . .	3



Lunenburg, . . . . .	1	Rockland, . . . . .	2
Lynn, . . . . .	8	Rockport, . . . . .	1
Malden, . . . . .	4	Salem, . . . . .	3
Manchester, . . . . .	1	Sharon, . . . . .	1
Marlborough, . . . . .	1	Somerville, . . . . .	7
Medford, . . . . .	7	South Braintree, . . . . .	1
Melrose, . . . . .	2	South Dartmouth, . . . . .	1
Montello, . . . . .	2	South Natick, . . . . .	1
Nahant, . . . . .	2	Springfield, . . . . .	5
Nantucket, . . . . .	2	Stoneham, . . . . .	6
New Bedford, . . . . .	1	Stow, . . . . .	1
Newburyport, . . . . .	2	Taunton, . . . . .	3
Newton, . . . . .	4	Vineyard Haven, . . . . .	1
North Abington, . . . . .	1	Wakefield, . . . . .	1
Northampton, . . . . .	1	Walpole, . . . . .	1
North Eastham, . . . . .	1	Waltham, . . . . .	1
North Easton, . . . . .	1	Wellesley, . . . . .	1
Pigeon Cove, . . . . .	1	Weston, . . . . .	1
Plymouth, . . . . .	2	West Wareham, . . . . .	1
Provincetown, . . . . .	3	Whitman, . . . . .	1
Quincy, . . . . .	2	Winthrop, . . . . .	2
Randolph, . . . . .	1	Woburn, . . . . .	1
Readville, . . . . .	1	Woods Hole, . . . . .	1
Revere, . . . . .	5	Worcester, . . . . .	6

Their previous education was as follows: high school, 155; academies, 11; technical schools and business colleges, 3; grammar schools, 9.

The average age of the cadets at entrance was eighteen years. There have been graduated during the year 48 cadets, 25 in the spring and 23 in the autumn. The number of cadets enrolled in the school at present is 116, this being the largest number the "Nantucket" can accommodate.

#### THE NAME OF THE SCHOOLSHIP CHANGED.

The Navy Department changed the name of the "Ranger" to "Nantucket" on March 20, 1918, such action being taken to avoid duplication of names, as the name of "Ranger" had been assigned to one of the new battle cruisers. The new name is an appropriate one as Nantucket has from the earliest days been closely connected with American shipping, and at one time it was the home port of a large fleet of sailing vessels;

it has furnished a large number of men to man American ships, both in time of war and peace. The first nautical school in the country, established by an English naval officer, Sir Isaac Coffin, about the year 1830, was located in Nantucket, and instruction was given on board a brig with a class of 21 boys.

The "Nantucket" is a barkentine-rigged steamer of 1,261 tons, and is built of iron, with the following dimensions: length, 177.4 feet; beam, 32 feet; draft, 14 feet. This ship has a wireless telegraph outfit, submarine signal apparatus, a steam capstan, steam steering gear, a complete electrical outfit, and is equipped with the latest appliances for technical and hygienic purposes. There is a complete outfit of boats, ample in capacity to carry all on board, and among them is a motor barge.

#### CLOTHING DEPOSIT.

The increase in the cost of uniforms and other regulation articles required by a cadet upon entering the school necessitated an advance in the first year deposit from \$90 to \$130, the deposit for the second year remaining at \$25.

#### GRADUATES IN THE WAR.

The record of the graduates in the war has been highly creditable; 257 graduates have served as officers in the Navy, the Naval Reserve Force, the Marine Corps and auxiliary services, with commissions ranging from ensigns to commanders. In addition, 151 graduates have served as officers in the American merchant marine, of whom 22 were in command of their ships. Many others volunteered for hazardous duty in subordinate but highly important service in the war zone.

In time of war the graduates of this school have constituted an important element in the military organization, and have contributed equally to the successful operation of transport and merchant shipping. With the return of peace, they are more than ever in demand to support and develop our maritime trade.

## THE AMERICAN MERCHANT MARINE.

The American merchant marine has entered a new era, and the prospect is excellent. The current report of the Commissioner of Navigation shows that the total tonnage of merchant vessels of the United States on June 30, 1918, was 9,924,518 tons, as against 7,928,688 tons on the same date in 1914. In four years foreign-going vessels have increased from 1,076,152 tons to 3,603,706 tons. The increase in our total tonnage during the past year is more than double that of any previous year in the history of the country. For the year ending Sept. 30, 1918, 608 sea-going vessels were built in the United States, aggregating 1,876,471 gross tons, compared with an output of 225,122 gross tons for the year ending June 30, 1915. During the year 1917 Congress authorized the construction of ships to the extent of \$1,234,000,000.

The new ships are large and well equipped and have comfortable quarters for officers and crew; the salaries paid are higher. While the extraordinary development of American shipping during the past two years has, of course, been due to the exigencies of the war, it is well assured that our country will retain the prominent place it now holds as one of the greatest maritime powers in the world.

## WINTER TERM, 1917-18.

The following is the report of former superintendent Capt. P. W. Hourigan, U. S. N., on the winter term 1917-18: —

Immediately after graduating the class on Sept. 13, 1917, the cadets were given leave, and the "Ranger" (now "Nantucket") went alongside the Navy Yard to fit for the winter term.

On Sept. 29, 1917, the examinations for admission were held. There were 161 applicants, of whom the leading 35 were selected, making the total enrollment of the school 112. This was 8 more than the usual complement, and was decided on because of the urgent demand for competent merchant officers at this time.

On October 15 the ship shifted her berth to her regular winter quarters at North End Park, and all cadets returned from leave on the 17th. The routine school work began on October 22 and continued uninterrupted until graduation day on March 20, 1918.



Very regretfully the ship was compelled to part with the name "Ranger," which had been hers since building; it is a historic one and was in itself an inspiration. The name had been decided on by the Navy Department for one of the new battle cruisers now building. At the request of the Board of Commissioners the name "Nantucket" was given the school ship as being a traditional seafaring one.

### THE SUMMER TERM.

The following is the report of Commander Charles N. Atwater, U. S. N., on the summer cruise: —

Because of the illness and detachment of my predecessor, it devolves upon me, although I only assumed the superintendency on August 14, to report upon the entire summer cruise.

The "Nantucket" left the navy yard May 3, 1918, and, after visiting Provincetown and Vineyard Haven, proceeded to Chesapeake Bay. The run down the coast accustomed the cadets to sea routine and sea duties, so that the summer's work was fairly underway when Washington, the first port of call, was reached. Anchors were carried out to moor the ship in a narrow berth between Potomac Park and the city, and during the vessel's stay the cadets were given an opportunity to familiarize themselves with the seat of the national government.

The next port visited was Annapolis, Md., where Rear Admiral Eberle, the superintendent of the Naval Academy, afforded the cadets an opportunity to observe the workings and facilities of the greatest of nautical schools. Among the midshipmen who came on board the "Nantucket" were two of our graduates.

At Baltimore all the seamen and firemen left the ship in a body. Fortunately, the cadets had by that time become fairly good seamen and firemen themselves and were able to perform these duties until the ship was back in Boston.

On the 30th of June the ship left Chesapeake Bay and on July 1 arrived at the New York Navy Yard. German submarines were then active along the coast, so that during the run double lookouts were maintained, and crews of cadets stood watches beside loaded guns. A heavier battery was awaiting the "Nantucket" at New York, and it was placed on board to be carried to Boston for installation. The new battery consists of one 4-inch forty-caliber and two 3-inch fifty-caliber single action, breach loading, quick-firing guns, and these and their accessories were deposited and secured on the quarterdeck. After stopping at several ports on the way, Boston was reached on July 14.

The removal of the battery of four 6-pounders and the work of shoring-up and placing the foundations for the new guns took until August 6, when 15 tons of ammunition for the new guns were received. It was not until August 9 that the ship was able to proceed to Hingham Bay and resume the interrupted work of the cruise.



By August 26 the cadets had been well drilled at the new guns, and on that date the guns were fired at various elevations and trains to test their mounts. The test was carried out 20 miles to the eastward of Boston Light, under a naval board appointed by the commandant of the First Naval District, and was successful.

On August 28 the "Nantucket" left Boston and for the first time passed through the Cape Cod Canal. The next six weeks were spent in cruising and exercising in Buzzards Bay, Gardiners Bay and Long Island Sound. Influenza became epidemic on board while at New Bedford, and so many cases developed that early in October it became advisable to return to Boston. After anchoring two days in Presidents Roads the ship went into her winter berth at North End Park on October 8. Throughout the cruise the cadets showed a keen appreciation of the advantages to be gained at this time by acquiring a nautical education. On October 9 the first class was graduated, and the graduates took the examinations of the Steamboat Inspection Service for licenses as third mates or third assistant engineers, and within ten days of graduation some were officers of steamships.

Cruising in inland waters favored the piloting and chart work of navigation, while the frequency of anchoring and getting underway was advantageous to instruction in seamanship and engineering. Special attention was given, with excellent results, to signalling. A radio detail assisted with the installation of a new one-half kilowatt radio set. The radio watch kept a record of all calls and communications heard. The unusual things in engineering were the fine way in which the senior engineering class took charge of the fireroom during the weeks there were no paid firemen, and the opportunity the engineer cadets had of seeing the engineering laboratory at the Naval Academy.

The cadets, although of course civilians and serving without pay, performed military duties with interest and good will. When outside the 3-mile limit or in lonely anchorages, extra watches were kept, with ammunition on deck and crews ready at loaded guns. Target practice was held with rifles and revolvers, and the cadets were drilled as infantry. They also cared for the engines, the boilers and the battery; cleaned and painted ship; manned the running boats; and in all things showed their pride in the appearance and efficiency of the vessel which was their home.

#### MEDICAL DEPARTMENT.

Up to the last two weeks of the cruise only eight cadets had been on the sick list. One of these had to be sent to the Brooklyn Hospital with appendicitis and was away from the ship four weeks; but the other cases were not serious.

On September 27 two cases of influenza developed. The next day there were six more. Other cases followed rapidly and it became necessary to establish a temporary hospital on the gun deck. In all there were thirty-one, including officers and crew, on the sick list with the disease. Owing

to the epidemic, which affected many besides those placed on the sick list, the gains in weight and height during the cruise were less than usual. The average gain in weight was 1.3 pounds, and that in height .1 of an inch.

### COAL CONSUMPTION.

	Tons.
Coal on hand and received, . . . . .	605.4
Expended, . . . . .	469.2
	<hr/>
Remaining Oct. 9, 1918, . . . . .	136.2
Itemized account of coal expended:—	
Moving ship, . . . . .	180.7
Dynamos and auxiliary machinery, . . . . .	227.2
Distilling, . . . . .	40.7
Galley purposes, . . . . .	20.4
Heating, . . . . .	.2
	<hr/>
Total, . . . . .	469.2



## STUDY SCHEDULE, WINTER TERM, 1918-19.

DAY AND HOUR.	First Class, Deck.	Second Class, Deck.	First and Second Class, Engineers.	Third Class, First Section.	Third Class, Second Section.	Fourth Class, First Section.	Fourth Class, Second Section.
Monday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Seamanship. Study. Navigation. Study.	Study. Seamanship. Study. Navigation.	Electricity. Study. Steam. Study.	Mathematics. Study. English. Study.	Study. Mathematics. Study. English.	English. Study. Mathematics. Study.	Study. English. Study. Mathematics.
Tuesday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Mathematics. Study. Seamanship. Study.	Study. Mathematics. Study. Seamanship.	Electricity. Study. Mathematics. Study.	Navigation. Study. Steam. Study.	Study. Navigation. Study. Steam.	English. Study. Navigation. Study.	Study. English. Study. Navigation.
Wednesday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Navigation. Study. English. Study.	Study. Navigation. Study. English.	Electricity. Study. Steam. Study.	Seamanship. Study. Electricity. Study.	Study. Seamanship. Study. Electricity.	Steam. Study. Seamanship. Study.	Study. Steam. Study. Seamanship.
Thursday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Navigation. Study. Seamanship. Study.	Study. Navigation. Study. Seamanship.	Steam. Study. English. Study.	Mathematics. Study. Steam. Study.	Study. Mathematics. Study. Steam.	Electricity. Study. Mathematics. Study.	Study. Electricity. Study. Mathematics.
Friday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Study. Mathematics. Steam. Study.	Navigation. Study. English. Study.	Study. Navigation. Study. English.	Steam. Study. Navigation. Study.	Study. Steam. Study. Navigation.

## OFFICERS AND INSTRUCTORS OF THE SCHOOL.

The following are the officers and instructors now connected with the school: —

Superintendent and commanding officer, Commander Charles N. Atwater, U. S. N.

Executive officer, Lieutenant Commander Howard G. Copeland, U. S. N. R. F. (graduate M. N. S.).

Navigator, John W. Thompson (graduate M. N. S.).

Watch officer, Lieut. Ernest V. Sandstrom, U. S. N.

Watch officer, Lieut. Nicolai Sivertsen, U. S. N. R. F.

Chief Engineer, Lieut. (j. g.) Ervin L. Kelley, U. S. N. R. F. (graduate M. N. S.).

Medical officer, Irvine L. Nowlan, M.D.

Paymaster and captain's clerk, Adolph E. Salsburg.

Instructor in mathematics, John D. Shore, S. B.

## PERSONNEL.

July 1, 1918, Francis T. Bowles of Barnstable reappointed a commissioner.

April 30, 1918, Capt. P. W. Hourigan, U. S. N., superintendent and commanding officer, detached.

April 25, 1918, Commander William F. Low, U. S. N., ordered to the "Nantucket" as commanding officer.

Aug. 14, 1918, Commander William F. Low, U. S. N., detached by the Navy Department.

Aug. 14, 1918, Commander Charles N. Atwater, U. S. N., ordered to the "Nantucket" as commanding officer.

June 1, 1918, Edward Smith, navigator, resigned.

June 1, 1918, John W. Thompson, watch officer, re-rated navigator.

Aug. 21, 1918, Ervin L. Kelley appointed chief engineer.

Aug. 31, 1918, Machinist John O'Neill, U. S. N., retired, chief engineer, resigned.

Oct. 3, 1918, Lieut. James O. Porter, U. S. N. R. F., executive officer, detached.

Nov. 14, 1918, John D. Shore, S. B., appointed instructor in mathematics.

Dec. 9, 1918, Lieutenant Commander Howard G. Copeland, U. S. N. R. F., ordered to school as executive officer.

Dec. 31, 1918, Frederick W. Farquhar, assistant engineer and electrician, resigned.

CADET OFFICERS OF THE MASSACHUSETTS NAUTICAL SCHOOL,  
1918.

## SUMMER TERM.

Walen, Leonard C., *Senior Cadet Officer.**Navigation.*

Hoffses, Hartley, . . . . .	<i>First Seaman Cadet Officer.</i>
Anderson, Alexander G., . . . . .	<i>Second Seaman Cadet Officer.</i>
Saunders, Raymond E., . . . . .	<i>Third Seaman Cadet Officer.</i>

*Engineering.*

Sample, Raymond H., . . . . .	<i>First Engineer Cadet Officer.</i>
Colson, Stuart R., . . . . .	<i>Second Engineer Cadet Officer.</i>
Easton, Francis J., . . . . .	<i>Third Engineer Cadet Officer.</i>

*Petty Officers.*

Gibbs, Arthur B.	Abbott, Raymond P.
Damon, Harold S.	Fraser, James E.

## WINTER TERM.

O'Leary, Arthur, *Senior Cadet Officer.**Navigation.*

Littlefield, Gordon A., . . . . .	<i>First Seaman Cadet Officer.</i>
Hopkins, Harry E., . . . . .	<i>Second Seaman Cadet Officer.</i>
Fraser, Jack A., . . . . .	<i>Third Seaman Cadet Officer.</i>

*Engineering.*

Hanna, Guy M., . . . . .	<i>First Engineer Cadet Officer.</i>
Sanford, Loran H., . . . . .	<i>Second Engineer Cadet Officer.</i>
Carey, Walter E., . . . . .	<i>Third Engineer Cadet Officer.</i>

*Petty Officers.*

Moulton, William H.	Roberts, Llewellyn.
DeLeskey, Frederick T.	Reed, Sherman W.

## MEMBERSHIP OF THE SCHOOL.

## GRADUATING CLASS, MARCH, 1918.

\* Received 85 per cent., or over, and entitled to wear gold star on coat collar.

*Seamanship Division.*

* Woods, Wilbur W.,	Provincetown.
* Fitzgerald, William H.,	Revere.
* Popkin, Jacob,	Malden.
* Anderson, Robert P.,	Melrose.
Crowley, James J., Jr.,	North Abington.
Hovland, Almer T.,	Newton Lower Falls.
Roswall, Clifford,	Medford.
Glines, Edgar G.,	Beverly.
Dean, Ira D.,	South Natick.
Mackie, Gordon C.,	Brookline.
Hill, Raphael W.,	Provincetown.
McKenzie, James C.,	Roxbury.
Strout, Alden L.,	Boston.
Cunningham, George M.,	Lawrence.
Lowry, James H.,	Canton.

*Engineering Division.*

* Carden, John R.,	Haverhill.
* Donlin, John R.,	Medford.
Freeman, Joseph,	Revere.
Wright, Laurence A.,	Falmouth.
* Clark, Wesley C.,	Arlington Heights.
Newman, Karl W.,	Brockton.
Perry, Frank V., Jr.,	Provincetown.
Smith, John E.,	Stoneham.
Hurld, Bernard F.,	Stoneham.
Evers, Ralph A.,	Medford.

## GRADUATING CLASS, OCTOBER, 1918.

*Seamanship Division.*

* Walen, Leonard C.,	Gloucester.
* Hoffses, Hartley,	Quincy.
Saunders, Raymond E.,	Somerville.
* Anderson, Alexander G.,	Dorchester.
Abbott, Raymond P.,	Newburyport.
Heaney, James R.,	Lynn.
Reagh, William S.,	Cliftondale.
Fraser, James E.,	Boston.
Gibbs, Arthur B.,	Nantucket.
Stockbridge, George R.,	Wellesley.

Distelman, Max, . . . . .	Newburyport.
Damon, Harold S., . . . . .	Plymouth.
Caswell, Leonard N., . . . . .	Fall River.
Sanborn, Gerald K., . . . . .	Lawrence.
Stevens, Paul A., . . . . .	Stoneham.
Moore, James R., . . . . .	East Lexington.

*Engineering Division.*

* <b>Sample, Raymond H.</b> , . . . . .	Montello.
Colson, Stuart R., . . . . .	Whitman.
Easton, Francis J., . . . . .	Randolph.
Kelley, Elmer J., . . . . .	Springfield.
Johnson, Louis H., . . . . .	Medford.
Ford, Edward J., . . . . .	Wakefield.
Lowe, LeRoy B., . . . . .	Woods Hole.

## CLASS TO GRADUATE APRIL, 1919.

*Seamanship Division.*

* <b>Lord, Harry C.</b> , . . . . .	Springfield.
Littlefield, Gordon A., . . . . .	Cambridge.
* <b>O'Leary, Arthur</b> , . . . . .	South Boston.
* <b>Gardiner, Nelson E.</b> , . . . . .	West Fitchburg.
* <b>Hopkins, Harry E.</b> , . . . . .	North Eastham.
Reed, Sherman W., . . . . .	Dorchester.
Moulton, William H., . . . . .	Bedford.
Fraser, Jack A., . . . . .	Medford.
Purdy, Paul E., . . . . .	Everett.
Scully, Charles B., . . . . .	Rockland.
Vincent, Rudolphus N., . . . . .	Vineyard Haven.
Roberts, Llewellyn, . . . . .	Somerville.
Donohoe, John W., . . . . .	Dorchester.
Wilkinson, Harold B., . . . . .	Lynn.
DeLeskey, Frederick T., . . . . .	East Boston.
Torrey, Charles W., . . . . .	Rockland.
Hall, Roy D., . . . . .	Dennis.
O'Brion, Robert S., . . . . .	Malden.
Bossom, Charles F., . . . . .	Arlington.

*Engineering Division.*

* <b>Carey, Walter E.</b> , . . . . .	Holyoke.
Hanna, Guy M., . . . . .	Waltham.
Bailey, Warren L., Jr., . . . . .	Worcester.
Sanford, Loran H., . . . . .	Beverly.
Couple, Frank J., . . . . .	Montello.
Walker, Albert E., . . . . .	Lawrence.
Cunningham, John D., . . . . .	Quincy.
Beatty, James F., . . . . .	Lowell.

## CLASS TO GRADUATE, OCTOBER, 1919.

*Seamanship Division.*

* Studley, William B., Jr.,	.	.	.	.	.	Fairhaven.
* Bemis, Edmond F.,	.	.	.	.	.	East Lynn.
Jenness, Walter W.,	.	.	.	.	.	Malden.
Gosselin, Joseph W.,	.	.	.	.	.	Nahant.
Cronin, Walter J.,	.	.	.	.	.	Somerville.
Mahoney, John J.,	.	.	.	.	.	Revere.
Longmore, Harold T.,	.	.	.	.	.	Stoneham.
Gilman, Charles E.,	.	.	.	.	.	Somerville.
Stone, Paul,	.	.	.	.	.	Pigeon Cove.
Henderson, George A.,	.	.	.	.	.	Brighton.
Morrill, Arthur G.,	.	.	.	.	.	Melrose.
Waters, Ernest B.,	.	.	.	.	.	Nahant.
McNulty, Richard R.,	.	.	.	.	.	Gloucester.
Harrington, Francis J.,	.	.	.	.	.	Revere.
Howe, Harry C.,	.	.	.	.	.	Stoneham.
Burnap, C. Cameron,	.	.	.	.	.	Lunenburg.
Nickerson, Richard F.,	.	.	.	.	.	South Duxbury.
Needham, Alfred A.,	.	.	.	.	.	Manchester.
Barrus, Adelburt,	.	.	.	.	.	Edgartown.

*Engineering Division.*

* Holmes, Carl W.,	.	.	.	.	.	North Easton.
Walcott, Roger N.,	.	.	.	.	.	Concord.
Morin, Edward H.,	.	.	.	.	.	Stoneham.
Cotter, Thomas F., Jr.,	.	.	.	.	.	Lawrence.
Mitchell, Charles B.,	.	.	.	.	.	Lawrence.
Forsberg, George E.,	.	.	.	.	.	Worcester.
Macintyre, Ronald G.,	.	.	.	.	.	Fall River.
Stickel, Charles H.,	.	.	.	.	.	East Lynn.
Smith, Harding,	.	.	.	.	.	Nantucket.
Clements, George C.,	.	.	.	.	.	Lynn.
Cusolito, Dominik J.,	.	.	.	.	.	Somerville.

## CLASS TO GRADUATE MARCH, 1920.

Steinmetz, Fred C. B.,	.	.	.	.	.	Springfield.
Taylor, Richard B.,	.	.	.	.	.	West Somerville.
Hendy, William R.,	.	.	.	.	.	Stow.
Dean, Joseph G.,	.	.	.	.	.	Springfield.
Donahue, Jos. H.,	.	.	.	.	.	Lawrence.
Colburn, Erwin F.,	.	.	.	.	.	Somerville.
O'Sullivan, Mortimer P.,	.	.	.	.	.	Medford.
Hannan, John F.,	.	.	.	.	.	Gloucester.
Burke, Joseph F.,	.	.	.	.	.	Everett.

Gibson, Charles J.,	Beverly.
Kant, Henry W.,	Allston.
Landrey, Francis X.,	Roslindale.
Jacques, Lawrence R.,	Springfield.
Leavitt, Raymond B.,	Taunton.
Oldroyd, James N.,	Lynn.
Tilton, Albert D.,	South Dartmouth.
Coughlin, Thomas F.,	Dorchester.
Full, Fred M., Jr.,	Rockport.
Berteaux, Arthur G.,	Boston.
Griffin, Oswald J.,	Fall River.
Boyd, Ronald A.,	Taunton.
Burgess, Carroll P.,	Duxbury.
Hartley, Noble M.,	Winthrop.
Osborne, Roger W.,	East Lynn.
Warner, Ralph B.,	Marlborough.
Coughlin, Daniel J.,	Lowell.
Tilton, Ralph E.,	Fitchburg.
Freeman, Charles A., Jr.,	Taunton.
Clegg, Earle F.,	Worcester.
Collins, Theodore,	Plymouth.
Bartlett, Clarence A.,	Lowell.
Whittemore, Joseph K.,	West Roxbury.

## CLASS TO GRADUATE, OCTOBER, 1920.

(Alphabetically arranged.)

Atwood, David F.,	West Falmouth.
Bartlett, Charles H.,	Roslindale.
Bowen, Raymond A.,	Gloucester.
Brown, Lorenzo C.,	Everett.
Clark, Charles R.,	Lynn.
Clarke, Roger W.,	Auburndale.
Colson, Ralph I.,	Everett.
Devlin, J. Francis, Jr.,	Salem.
Donnelly, Francis E.,	Roslindale.
Flanagan, John L.,	Lawrence.
Flanagan, Joseph H.,	Lawrence.
Gordon, Max,	South Braintree.
Hall, Theodore R.,	Somerville.
Heneghan, William J.,	Fall River.
Lord, George P., Jr.,	Salem.
Mariner, Robert D.,	Cambridge.
McCreery, Robert D., Jr.,	Lawrence.
Paddock, Alexander M. S.,	Cambridge.
Phinney, Henry,	West Roxbury.
Poor, Sidney E.,	Sharon.



Robinton, Frank A.,	.	.	.	.	.	.	Woburn.
Sawyer, J. Harlan,	.	.	.	.	.	.	Weston.
Stevens, Earle S.,	.	.	.	.	.	.	Readville.
Stone, Alexander,	.	.	.	.	.	.	Revere.
Tyrrell, William S.,	.	.	.	.	.	.	Cambridge.
Watt, William G.,	.	.	.	.	.	.	Auburndale.
Young, John D.,	.	.	.	.	.	.	Winthrop.

## CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1918, INCLUSIVE.

	ADMITTED			GRADUATED			HONORABLY DISCHARGED			Withdrawn, dismissed, dropped.	Number connected with the School.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.		
1893,	138	-	138	-	-	-	29	-	29	24	138
1894,	42	21	63	-	-	-	25	17	43	18	156
1895,	33	38	71	19	19	38	6	6	12	6	156
1896,	35	39	74	20	17	37	16	15	31	17	174
1897,	32	41	73	20	21	41	10	10	20	9	165
1898,	42	57	99	15	25	40	12	14	26	23	194
1899,	34	45	79	11	12	23	24	17	41	11	184
1900,	28	50	78	14	36	50	9	12	21	14	186
1901,	34	37	71	11	29	40	8	12	20	16	172
1902,	32	58	90	16	22	38	16	18	34	13	197
1903,	34	32	66	17	14	31	10	15	25	17	178
1904, <sup>1</sup>	-	-	60	16	29	45	5	12	17	31	165
1905, <sup>1</sup>	-	-	65	10	10	20	-	-	9	13	137
1906, <sup>1</sup>	-	-	50	16	19	35	-	-	18	19	145
1907, <sup>1</sup>	-	-	60	10	15	25	-	-	17	26	133
1908, <sup>1</sup>	-	-	45	8	9	17	-	-	9	9	110
1909, <sup>1</sup>	-	-	81	14	22	36	-	-	7	16	156
1910, <sup>1</sup>	-	-	54	6	15	21	-	-	16	15	151
1911, <sup>1</sup>	-	-	69	20	23	43	-	-	7	18	168
1912, <sup>1</sup>	-	-	57	17	16	33	-	-	14	15	157
1913, <sup>1</sup>	-	-	79	21	19	40	-	-	20	8	174
1914, <sup>1</sup>	-	-	65	20	16	36	-	-	22	20	171
1915, <sup>1</sup>	-	-	70	26	19	45	-	-	18	11	176
1916, <sup>1</sup>	-	-	73	23	15	38	-	-	36	3	175
1917, <sup>1</sup>	-	-	69	25	11	36	-	-	16	3	167
1918, <sup>1</sup>	-	-	66	31	17	48	-	-	10	4	178
Totals,	-	-	1,865	406	439	845	-	-	538	366	-

<sup>1</sup> Since 1904 the cadets have been unclassified during the first year of their course.

## IN MEMORIAM.

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**John Erickson, New Bedford.**

A third assistant engineer. Graduated Sept. 18, 1916. Lost his life Oct. 11, 1917, when his ship, the "Lewis Luckenbach," was torpedoed and sunk off Brest, France.

**Edward D. Newell, Gloucester.**

A lieutenant in the United States Naval Reserve Force and commanding U. S. S. "Cherokee." Graduated Oct. 10, 1913. Lost his life Feb. 26, 1918, when the "Cherokee" foundered off the New Jersey coast during a storm.

**James A. McGourty, Worcester.**

A warrant machinist in the United States Naval Reserve Force. Graduated Sept. 13, 1917. Lost his life April 17, 1918, when his ship, the U. S. S. "Lakemoor," was torpedoed and sunk about 3 miles off Crossley Light, Scotland.

**Fred J. Butterfield, Haverhill.**

A captain in the merchant marine, commanding the S. S. "Florence H." Lost his life April 17, 1918, when the "Florence H." was wrecked by an internal explosion while at anchor in a harbor of France. He was an alumnus of the Massachusetts Nautical School.

**John F. McGourty, Worcester.**

A second lieutenant in the United States Coast Guard Service. Graduated Oct. 15, 1900. Lost his life Sept. 6, 1918, when his ship, the U. S. S. "Tampa," was torpedoed and sunk in the Bristol channel.

**John T. Carr, Malden.**

A first lieutenant in the United States Coast Guard Service. Graduated March 22, 1898. Lost his life Sept. 6, 1918, when his ship, the U. S. S. "Tampa," was torpedoed and sunk in the Bristol channel.

**Grant Gately, Cambridge.**

An ensign in the United States Naval Reserve Force. Graduated Oct. 15, 1914. Lost his life Sept. 30, 1918, when his ship, the U. S. S. "Ticonderoga," was sunk by shell fire in mid-Atlantic.

**William J. Bonner, Dorchester.**

An ensign in the United States Naval Reserve Force. Graduated April, 1915. Died at sea Sept. 21, 1918, on board the U. S. S. "Tjikembang," while en route home from France.

**Charles R. Seed, Worcester.**

Died Oct. 8, 1918. Was an alumnus of the school and a lieutenant in the United States Naval Reserve Force.

**Emery Rice, Brighton.**

A lieutenant commander in the United States Naval Reserve Force and commanding U. S. S. "Mongolia." Graduated April 3, 1897. Died Jan. 4, 1919, of pneumonia at the United States Naval Hospital, Brooklyn.

## REGISTER OF GRADUATES.

*Officers in the Merchant Marine.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1894	James E. Reardon, . .	Roxbury, . .	Captain, . . .	"Moldegaard."
1894	Albert L. Warner, . . .	Wollaston, . .	Captain, . . .	"Lake Gardner."
1895	Walter J. Healey, . . .	Worcester, . .	Captain, . . .	"O. T. Waring."
1895	Geo. L. P. Covell, . . .	Roxbury, . .	Captain, . . .	Inter-Island Steamship Company.
1896	Henry R. Bodge, . . .	Wollaston, . .	Captain, . . .	"Northland."
1896	George R. Lauriat, . .	Medford, . .	Captain, . . .	"Gen. J. M. Bran-
1896	Wm. N. P. Baker, . . .	Dorchester, . .	Captain, . . .	nana." "Mariana."
1897	Chas. W. Clift, . . . .	Whitman, . .	Captain, . . .	"Gen. J. M. Scho-
1897	Mina Dailey, . . . .	Roxbury, . .	Captain, . . .	field." "Col. Harwood."
1899	Edward G. Smith, . .	Boston, . . .	Captain, . . .	"Freeport."
1900	William B. Knight, . .	Hull, . . . .	Captain, . . .	"Catherine D."
1900	Joseph E. Gately, . . .	Marlborough, .	Captain, . . .	United States Ship-
1901	Theodore H. Bicknell, .	Melrose, . . .	Captain, . . .	ping Board. "Hewitt."
1901	Robert W. Tucker, . .	Kendal Green, .	Captain, . . .	"Oconee."
1903	Mark Woodbury, . . .	Townsend, . .	Captain, . . .	"Point Loma."
1904	Edw. C. Roberts, . . .	North Beverly, .	Captain, . . .	"Gen. Goethals."
1905	Frederick S. Walker, . .	Dorchester, . .	Captain, . . .	"Lake Benton."
1905	Harold H. Gridley, . .	Dorchester, . .	Captain, . . .	"Caddo."
1907	Frederic A. Gainard, . .	Chelsea, . . .	Captain, . . .	- -
1909	Robert S. Sparrow, . .	Eastham, . .	Captain, . . .	"Sutherland."
1909	Harold C. Cooper, . .	Worcester, . .	Captain, . . .	"Polarine."
1911	Eugene E. Miller, . . .	East Saugus, .	Captain, . . .	"Wico."
1899	Richard T. Blackford, .	Marblehead, .	First officer, . .	"Daylite."
1900	Edward Smith, . . . .	Wellesley, . .	First officer, . .	"Nickerie."
1900	Alfred M. Cummings, .	Worcester, . .	First officer, . .	"Virginian."
1900	Clayton G. Parsons, . .	Salem, . . . .	First officer, . .	"Ryswick."
1901	Chas. D. Harrington, .	Cambridge, . .	First officer, . .	"Mascotte."
1902	Edwin J. Madden, . .	Everett, . . .	First officer, . .	"St. Louis."
1903	Benj. O'Connell, . . .	Peabody, . .	First officer, . .	"Vigilancia."
1908	Chester B. Mellen, . .	Quincy, . . .	First officer, . .	"Mangore."
1911	Norris T. Ela, . . . .	E. Douglas, . .	First officer, . .	"Augusta."
1912	Russell A. Eastman, . .	Mattapoisett, .	First officer, . .	"Evelyn."
1913	Kenneth E. Cahoon, . .	W. Tisbury, . .	First officer, . .	"Aurora."
1913	Wilfred H. Senior, . . .	Boston, . . .	First officer, . .	"H. C. Folger."
1913	Philip J. Fanning, . .	Needham, . .	First officer, . .	"Caweta."
1915	Charles N. Bamforth, .	So. Lincoln, . .	First officer, . .	"West Hampton."

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1915	Earle D. Hammond, . .	Mattapoisett, . .	First officer, . .	"Yosemite."
1916	Thomas B. Lufkin, . .	Gloucester, . .	First officer, . .	"Katahdin."
1897	Edwin F. Darling, . .	W. Dennis, . .	Second officer, . .	"Jonancy."
1902	Wm. M. Chisholm, . .	No. Attleborough, . .	Second officer, . .	- -
1904	Leslie G. Holmes, . . .	E. Whitman, . .	Second officer, . .	"Antilles."
1906	John Ruyter, . . . .	Stoughton, . .	Second officer, . .	"Lake Govan."
1907	Frazier L. Sears, . . .	E. Dennis, . .	Second officer, . .	Standard Oil Company.
1910	Franklin K. Tyler, . .	Beachmont, . .	Second officer, . .	"Saramacca."
1911	Wesley F. Besse, . . .	So. Hanson, . .	Second officer, . .	"F. Q. Barstow."
1913	Alden L. Hodges, . . .	Boston, . . . .	Second officer, . .	"Lake Linden."
1913	James A. MacCabe, . .	Osterville, . .	Second officer, . .	"Santa Cecilia."
1914	Laurence L. Horton, . .	Eastham, . .	Second officer, . .	United States Shipping Board.
1914	David Swinson, . . . .	Gloucester, . .	Second officer, . .	- -
1915	Albert V. Jones, . . .	Fall River, . .	Second officer, . .	"Cricket."
1915	Harold F. Craven, . .	Lawrence, . .	Second officer, . .	"Currier."
1916	John W. Simmons, . .	Springfield, . .	Second officer, . .	- -
1916	Charles A. Martell, . .	Somerville, . .	Second officer, . .	"Shoshone."
1916	Clayton W. Collins, . .	Waquoit, . .	Second officer, . .	"Polarine."
1916	Arthur J. Kenney, . .	Brookline, . .	Second officer, . .	"Kentuckian."
1916	Harold R. Congdon, . .	Boston, . . . .	Second officer, . .	"Lake Conway."
1916	Clifford E. Stanley, . .	Salem, . . . .	Second officer, . .	United States Shipping Board.
1917	A. Henry Rowe, . . . .	Roslindale, . .	Second officer, . .	"J. E. O'Neil."
1917	Ivan Freeman, . . . .	E. Orleans, . .	Second officer, . .	"Sutherland."
1917	Robert H. Sheridan, . .	Stoneham, . .	Second officer, . .	"Matinicock."
1917	David McLaren, . . . .	Dedham, . .	Second officer, . .	"Bacchus."
1917	Sydney L. MacLaughlin, .	Wollaston, . .	Second officer, . .	"Bramell Point."
1917	Herbert W. Susman, . .	Dorchester, . .	Second officer, . .	"Munabro."
1917	Ernest V. Wyatt, . . .	Boston, . . . .	Second officer, . .	"Adrian Iselin."
1917	Alton E. Borden, . . .	Fall River, . .	Second officer, . .	S. S. "Pt. Judith."
1918	Robert Anderson, . . .	Melrose, . . . .	Second officer, . .	"Myzzar."
1907	Herbert Garity, . . . .	Boston, . . . .	Third officer, . .	"Carolyn."
1915	Arthur A. Hovgaard, . .	Brookline, . .	Third officer, . .	"Chas. Braley."
1915	Ronald B. Ford, . . . .	Lawrence, . .	Third officer, . .	"Orion."
1915	Russell L. Saunders, . .	Allston, . . . .	Third officer, . .	"Everett."
1916	Paul H. Browne, . . . .	Roslindale, . .	Third officer, . .	"Camfield."
1917	William W. Storey, . .	Stoneham, . .	Third officer, . .	"San Mateo."
1917	Alan R. Barton, . . . .	Winthrop, . .	Third officer, . .	"Gulflight."

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1917	Donald MacWhinnie, . . .	New Bedford, .	Third officer, . .	"Crayeroft."
1918	Wilbur W. Woods, . . .	Provincetown, .	Third officer, . .	"El Paso."
1918	Clifford Roswall, . . .	Medford, . . .	Third officer, . .	"Tourist."
1918	Almer T. Hovland, . . .	Newton Lower Falls, . . .	Third officer, . .	"Guaro."
1918	Ira Dean, . . . . .	Natick, . . . .	Third officer, . .	"Lake Ogden."
1918	James Crowley, . . . .	No. Abington, .	Third officer, . .	"Suffolk."
1918	Arthur B. Gibbs, . . . .	Nantucket, . . .	Third officer, . .	"Hampden."
1918	Hartley Hoffses, . . . .	Quincy, . . . .	Third officer, . .	"Lake Ogden."
1918	James E. Fraser, . . . .	Boston, . . . .	Third officer, . .	"Lake Yemassee."
1918	Gerald K. Sanborn, . . .	Lawrence, . . .	Third officer, . .	"Western City."
1918	Leonard C. Walen, . . . .	Gloucester, . . .	Third officer, . .	"El Albra."
1918	Max Distelman, . . . .	Newburyport, .	Third officer, . .	"Brabant."
1898	Eldon G. Freeman, . . . .	Whitman, . . . .	State pilot, . . .	San Francisco.
1900	I. Clarence Bailey, . . .	Kingston, . . . .	Pilot, . . . . .	Boston Pilot Boat.
1895	Charles H. Lincoln, . . .	Gloucester, . . .	Marine surveyor,	- -
1895	Michael D. Sullivan, . . .	Boston, . . . .	Chief engineer, . .	"Rosecrans."
1897	Augustus T. Holmes, . . .	Ipswich, . . . .	Chief engineer, . .	"J. M. Guffey."
1897	Edw. J. Cogan, . . . .	Lynn, . . . . .	Chief engineer, . .	- -
1897	Albert E. Small, . . . .	Jamaica Plain, .	Chief engineer, . .	"Capt. Guyenmer."
1897	Charles E. Rowe, . . . .	Lynn, . . . . .	Chief engineer, . .	- -
1898	Wm. E. Ballsdon, . . . .	Neponset, . . . .	Chief engineer, . .	"Herman Winter."
1898	Wilbur S. Lamont, . . . .	Leominster, . . .	Chief engineer, . .	Panama Canal.
1900	Elmer P. Butterworth, . .	Foxborough, . . .	Chief engineer, . .	"Gulfcoast."
1900	Norris Sibley, . . . . .	Worcester, . . . .	Chief engineer, . .	"Col. Wikoff."
1900	William Glover, . . . . .	Wilmington, . . .	Chief engineer, . .	"Mielero."
1901	Daniel Putler, . . . . .	No. Easton, . . .	Chief engineer, . .	"Gloria."
1903	James S. McGarry, . . . .	Shrewsbury, . . .	Chief engineer, . .	"El Alba."
1904	Chas. W. Bumpus, . . . .	Wakefield, . . . .	Chief engineer, . .	"City of Gloucester."
1904	Cecil L. McIntyre, . . . .	Upton, . . . . .	Chief engineer, . .	- -
1905	Chas. F. Tarr, . . . . .	Taunton, . . . . .	Chief engineer, . .	"Liebenfels."
1911	Harvey M. Thorndike, . . .	Cliftondale, . . .	Chief engineer, . .	"El Capitan."
1911	Robert F. Phinney, . . . .	Roslindale, . . .	Chief engineer, . .	"Matinicock."
1896	Forrest H. McIntyre, . . .	Gloucester, . . .	First assistant engineer.	"Millard."
1899	Frank P. Killion, . . . .	Malden, . . . . .	First assistant engineer.	"Mauna Loa."
1900	J. J. Donohue, . . . . .	Cambridge, . . .	First assistant engineer.	"Oregon."
1904	Edw. J. Chadbourne, . . .	Reading, . . . .	First assistant engineer.	"H. F. Dimock."
1905	Thomas W. Chisholm, . . .	No. Billerica, . .	First assistant engineer.	- -



*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1909	Wm. A. Sullivan, . . .	East Boston, .	First assistant engineer.	"R. T. Frank."
1909	Fritz T. Kebler, . . .	Rochdale, .	First assistant engineer.	"H. F. Dimock."
1909	Richard K. Henry, . . .	Everett, . . .	First assistant engineer.	- -
1910	R. Wilbur Anderson, . .	Mattapan, . .	First assistant engineer.	"Massachusetts."
1910	Leslie S. Badger, . . .	Somerville, . .	First assistant engineer.	"Galveston."
1914	Leslie T. Severance, . .	Malden, . . .	First assistant engineer.	"Malden."
1914	Charles P. Tucker, . . .	Roxbury, . . .	First assistant engineer.	"Osage."
1914	Arthur C. Goodwin, . . .	Easton, . . .	First assistant engineer.	"Melrose."
1917	John D. Noonan, . . .	Mansfield, . .	First assistant engineer.	"Edw. Pierce."
1895	Fred'k H. Stackpole, . .	Hyde Park, .	Second assistant engineer.	"City of Brockton."
1896	John O. Sargent, . . .	Worcester, . .	Second assistant engineer.	"St. Louis."
1897	Perley W. Kimpton, . .	Somerville, . .	Second assistant engineer.	"Shawmut."
1898	Arthur P. Stevens, . . .	Nantucket, . .	Second assistant engineer.	"Ponce."
1900	Earle P. Marshall, . . .	No. Easton, . .	Second assistant engineer.	"Uruguay."
1902	Augustus W. Hart, . . .	No. Truro, . .	Second assistant engineer.	"Chippewa."
1906	Victor M. Foster, . . .	E. Boston, . .	Second assistant engineer.	"Newton."
1908	Arthur E. Whiton, . . .	Wakefield, . .	Second assistant engineer.	"Norwood."
1911	Samuel D. White, . . .	Hyannisport, .	Second assistant engineer.	"Edw. Pierce."
1912	Richard K. O'Connell, . .	No. Easton, . .	Second assistant engineer.	"Currier."
1912	George R. Davison, . . .	Springfield, .	Second assistant engineer.	"Ancon."
1912	Louis H. Racicot, . . .	Lowell, . . .	Second assistant engineer.	"Ruth."
1913	Edward J. Fogarty, . . .	E. Boston, . .	Second assistant engineer.	"Ockenfels."
1914	Benj. H. Allen, Jr., . .	Lawrence, . .	Second assistant engineer.	"Leviathan."
1914	Jos. L. Concannon, . . .	So. Boston, . .	Second assistant engineer.	"Brindella."
1915	Roy C. Hartwell, . . .	Easton, . . .	Second assistant engineer.	"Arizonan."
1915	John Holmes, . . . .	Campello, . . .	Second assistant engineer.	"Oregonian."
1915	A. Herbert Winquist, . .	Mattapan, . . .	Second assistant engineer.	"Lake Louise."
1917	Arthur Massey, . . . .	Lawrence, . . .	Second assistant engineer.	"Ascutney."
1917	Ernest E. Raby, . . . .	No. Easton, . .	Second assistant engineer.	"Corsica."
1903	Rudolph Komenda, . . .	Somerville, . .	Third assistant engineer.	"Hannibal."
1907	Calvin N. Simonds, . . .	Needham, . . .	Third assistant engineer.	Eastern Steamship Company.
1912	Walter L. Brewster, . . .	Somerville, . .	Third assistant engineer.	"F. J. Lisman."
1913	Russell A. McLay, . . .	Lawrence, . . .	Third assistant engineer.	- -
1914	Arthur F. Higgins, . . .	Lawrence, . . .	Third assistant engineer.	"New York."
1915	Stanislaus P. J. Ciolkosz,	Taunton, . . .	Third assistant engineer.	"City of Puebla."
1916	Carleton G. Reed, . . .	Lexington, . .	Third assistant engineer.	- -
1916	Richard A. Standley, . .	Beverly, . . .	Third assistant engineer.	"Lake Benton."



*Officers in the Merchant Marine — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1918	Raymond H. Sample, .	Montello, . .	Third assistant engineer.	"Lake Butler."
1918	Karl W. Newman, . .	Brockton, . .	Third assistant engineer.	United States Shipping Board.
1918	Elmer J. Kelley, . . .	Springfield, .	Third assistant engineer.	"Lake Licking."
1902	Wm. H. Connor, . . .	Brighton, . .	Engineer, . . .	Boston Fireboat (Engine No. 31).

*Ship Construction.*

1897	Alden H. Adams, . . .	Millers Falls, .	First-class loftsmen.	Emergency Fleet Corporation.
1898	Jos. E. Sheedy, . . .	Reading, . . .	Assistant manager,	Seattle Shipbuilding Company.
1898	Geo. F. Waite, . . . .	Winthrop, . . .	- -	American International Shipbuilding Company.
1901	Frank A. Browne, . . .	Westborough, .	General purchasing agent.	Emergency Fleet Corporation.
1902	Ernest L. Saunders, . .	Brockton, . . .	Sub-foreman, . .	Fore River Shipbuilding Corporation.
1909	Alex. F. Smith, . . . .	Nantucket, . . .	Engineering work,	Fore River Shipbuilding Corporation.
1913	Arnold A. Laskey, . . .	Cambridge, . .	Engineering work,	Emergency Fleet Corporation, Oakland, Cal.

*Instructors.*

1895	Harold W. Davis, . . .	Somerville, . .	Instructor in navigation.	New England Institute of Navigation.
1909	Ervin L. Kelley, . . .	Medford, . . .	Chief engineer, . .	U. S. S. "Nantucket."
1912	John W. Thompson, . .	Marion, . . . .	Navigating officer,	U. S. S. "Nantucket."

*Enrolled in the United States Naval Reserve Force.*

1894	William W. Ramsay, . .	Cambridge, . .	Lieutenant Commander.	Submarine Base, New London, Conn.
1897	Frederick A. Sparks, . .	Provincetown, .	Lieutenant Commander.	U. S. S. "Lake Harney."
1897	Frederick W. Jones, . .	Winchester, . .	Lieutenant Commander.	U. S. S. "West Mead."
1898	Carl E. A. Anderson, . .	Roslindale, . .	Lieutenant Commander.	U. S. S. "Oregonian."
1898	Louis E. Congdon, . . .	Boston, . . . .	Lieutenant Commander.	Convoy Commodore.
1899	Walter S. Lynch, . . . .	Chelsea, . . . .	Lieutenant Commander.	Fourth Naval District.
1900	Charles E. Lowe, . . . .	Roxbury, . . .	Lieutenant Commander.	- -
1901	John J. Coholan, . . . .	So. Boston, . .	Lieutenant Commander.	U. S. S. "Roepet."
1902	A. Russell Cushing, . .	Dorchester, . .	Lieutenant Commander.	U. S. S. "Sagadahoc."

*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1902	Arthur Jensen, . . .	Provincetown, .	Lieutenant Com- mander.	U. S. S. "Eastern Chief."
1902	Osborne E. McKay, . .	Provincetown, .	Lieutenant Com- mander.	U. S. S. "Celebes."
1902	Fred C. Seibert, . . .	Greenfield, . .	Lieutenant Com- mander.	U. S. S. "Solace."
1903	Harry M. Bostwick, . .	Northbridge, .	Lieutenant Com- mander.	U.S.S. "Abarenda."
1903	Robert B. Powers, . .	Brockton, . .	Lieutenant Com- mander.	Convoy Commo- dore.
1903	Nicholas J. Kane, . . .	Whitman, . .	Lieutenant Com- mander.	U.S.S. "Panaman."
1904	Andrew J. Iverson, . .	Beverly, . . .	Lieutenant Com- mander.	U. S. S. "Dupont."
1905	Fred G. Carleton, . . .	Maynard, . . .	Lieutenant Com- mander.	Executive officer, Commonwealth Pier.
1906	William H. Lee, . . .	Roxbury, . . .	Lieutenant Com- mander.	U.S.S. "Houston."
1906	Howard G. Copeland, .	Wakefield, . .	Lieutenant Com- mander.	U. S. S. "Nan- tucket."
1907	Harry L. Chick, . . .	Beverly, . . .	Lieutenant Com- mander.	Administration of- ficer, N. O. T. S., Baltimore, Md.
1907	William M. Gifford, . .	Woods Hole, .	Lieutenant Com- mander.	U. S. S. "Beaufort."
1908	Ernest F. Robinson, . .	E. Boston, . .	Lieutenant Com- mander.	U. S. S. "Nero."
1908	Edw. S. Ells, . . .	Haverhill, . .	Lieutenant Com- mander.	U. S. S. "Blue Ridge."
1909	Carroll E. Higgins, . .	Somerville, . .	Lieutenant Com- mander.	U. S. S. "Buiten- zorg."
1909	Eric E. Winquist, . . .	Mattapan, . . .	Lieutenant Com- mander.	U. S. S. "Cuyama."
1911	Raymond C. Vose, . .	Cambridge, . .	Lieutenant Com- mander.	U. S. S. "Drechter- land."
1911	Harold S. Dexter, . . .	Mattapoisett, .	Lieutenant Com- mander.	U. S. S. "Carib."
1911	Frederick J. Shaw, . .	Cambridge, . .	Lieutenant Com- mander.	U. S. S. "Lake Su- perior."
1913	Arthur G. Burt, . . .	Whitman, . .	Lieutenant Com- mander.	U. S. S. "Mallory."
1895	William J. Fitzgerald, .	So. Boston, . .	Lieutenant, . .	Navy Yard, Charles- town.
1895	Edwin C. Bliss, . . .	New York, . .	Lieutenant, . .	U. S. S. "Vestal."
1896	James H. B. Meehan, .	Lowell, . . .	Lieutenant, . .	U. S. S. "Proteus."
1898	Everett S. Ransom, . .	Mattapoisett, .	Lieutenant, . .	U. S. S. "Parthe- nia."
1900	Gershom Bradford, . .	Duxbury, . .	Lieutenant, . .	U.S.S. "Newport."
1900	Hollis M. Cornwall, . .	Melrose, . . .	Lieutenant, . .	Material inspector, N. O. T. S., Fourth Naval District.
1900	E. Newton Parker, . .	Greenfield, . .	Lieutenant, . .	-
1901	Robert A. Patterson, .	Brighton, . .	Lieutenant, . .	Material officer, N. O. T. S., First Naval District.
1901	Eugene I. K. Murphy, .	Worcester, . .	Lieutenant, . .	U. S. S. "Christa- bel."
1903	Edward J. Hogan, . . .	Charlestown, .	Lieutenant, . .	Assistant inspector of machinery, Squantum.
1903	Edmund E. Powers, . .	Cambridgeport,	Lieutenant, . .	U.S.S. "Mongolia."
1905	James S. Crocker, . . .	Nahant, . . .	Lieutenant, . .	U. S. S. "Hewitt."
1905	Walter C. Lockhart, . .	Wakefield, . .	Lieutenant, . .	U. S. S. "W. N. Page."
1906	Arthur G. Burbank, . .	Carver, . . .	Lieutenant, . .	U. S. S. "Winding Gulf."
1906	Lewis B. Butler, . . .	Worcester, . .	Lieutenant, . .	U. S. S. "Lake Wood."

*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1906	Bradford N. A. Gladding,	New Bedford, .	Lieutenant, . .	Aide for inventory and allowances, N. O. T. S., Fifth Naval District.
1906	Augustus C. Caldwell, .	Dorchester, .	Lieutenant, . .	U. S. S. "Gorontalo."
1906	Ernest J. Flannigan, . .	Wakefield, . .	Lieutenant, . .	U.S.S. "Kearsarge."
1907	Geo. H. Stickney, . . .	Worcester, . .	Lieutenant, . .	U. S. S. "Pensacola."
1907	Walter L. Smith, . . .	Ashburnham, .	Lieutenant, . .	U. S. S. "Mt. Shasta."
1907	Elmer B. Small, . . .	No. Truro, . .	Lieutenant, . .	U. S. S. "Orizaba."
1907	Samuel P. Osgood, . .	Middleborough,	Lieutenant, . .	U.S.S. "Munaries."
1908	Thos. B. Pellett, . . .	Worcester, . .	Lieutenant, . .	U.S.S. "Kanawha."
1908	Eugene P. Shevlin, . .	E. Boston, . .	Lieutenant, . .	U. S. S. "Tulip."
1909	Leo A. Keating, . . .	Natick, . . .	Lieutenant, . .	U. S. S. "F. J. Luckenbach."
1909	Everett B. Ward, . . .	Lynn, . . .	Lieutenant, . .	U. S. S. "Celtic."
1911	Charles C. Plummer, . .	Cambridge, . .	Lieutenant, . .	U. S. S. "Minnesota."
1911	Charles F. Fornason, . .	Marblehead, .	Lieutenant, . .	U. S. S. "Aphrodite."
1911	Albert L. Ware, . . .	Cambridge, . .	Lieutenant, . .	-
1911	Patrick S. Coakley, . .	Malden, . . .	Lieutenant, . .	Port Newark, N. J.
1911	Alfred Marques, . . .	Jamaica Plain, .	Lieutenant, . .	U. S. S. "Malang."
1912	Herbert A. Burns, . . .	New Bedford, .	Lieutenant, . .	U. S. S. "Astoria."
1912	Ellenwood Folger, . . .	Nantucket, . .	Lieutenant, . .	U. S. S. "Biddle."
1912	Robert M. Gray, . . .	Melrose, . . .	Lieutenant, . .	U. S. S. "Wm. A. McKenney."
1912	Ralph E. Merithew, . .	Haverhill, . .	Lieutenant, . .	U. S. S. "Neponset."
1912	John M. Marks, . . .	Gloucester, . .	Lieutenant, . .	-
1912	Harold L. Ertel, . . .	Longmeadow, .	Lieutenant, . .	U. S. S. "W. N. Page."
1912	Wm. A. Hamilton, . . .	Cliftondale, .	Lieutenant, . .	U. S. S. "Batjan."
1912	Clarence L. Howard, . .	Wellesley, . .	Lieutenant, . .	U. S. S. "American."
1912	Joseph M. Daniel, . . .	Osterville, . .	Lieutenant, . .	U. S. S. "Hilton."
1912	Norman E. Merrill, . .	Walpole, . . .	Lieutenant, . .	Naval aviation.
1913	Ralph W. Dearborn, . .	Mansfield, . .	Lieutenant, . .	U. S. S. "Polar Star."
1913	Borden A. Tuell, . . .	New Bedford, .	Lieutenant, . .	U. S. S. "Peter H. Crowell."
1913	Everett O. Swinson, . .	Gloucester, . .	Lieutenant, . .	U. S. S. "West Point."
1914	Ten Eyck H. Reed, . . .	So. Framingham,	Lieutenant, . .	U. S. S. "Martha Washington."
1914	Samuel A. Gates, . . .	Malden, . . .	Lieutenant, . .	U. S. S. "Panaman."
1914	Samuel Lee, . . . .	Roxbury, . . .	Lieutenant, . .	U. S. S. "Antilla."
1914	Joseph L. Turner, . . .	Amherst, . . .	Lieutenant, . .	U. S. S. "Lake Gedney."
1915	Charles E. Griffith, . .	No. Cambridge.	Lieutenant. . .	U. S. S. "Saturn."
1915	Ralph S. Moore, . . .	Newton, . . .	Lieutenant, . .	U. S. S. "Pennsylvanian."
1915	Leif H. Konrad, . . .	Roxbury, . . .	Lieutenant, . .	U. S. S. "Pasagoula."
1915	Charles H. Hurley, . .	Gardner, . . .	Lieutenant, . .	U. S. S. "Sierra."

*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1915	Charles P. Jacobson, . .	Everett, . . .	Lieutenant, . .	- -
1915	William C. Davenport, .	New Bedford, .	Lieutenant, . .	U. S. S. "Katrina Luckenbach."
1915	Herman S. Mayo, . . .	Provincetown, .	Lieutenant, . .	U. S. S. "Alaskan."
1895	Louis E. Burwell, . . .	Somerville, . .	Lieutenant (junior grade).	Flag Office, Brest.
1898	John Ganser, . . . .	Jamaica Plain, .	Lieutenant (junior grade).	- -
1898	Richard Rowles, . . .	Jamaica Plain, .	Lieutenant (junior grade).	U. S. S. "Manchu-ria."
1902	Arthur T. Luther, . . .	Swansea, . .	Lieutenant (junior grade).	Captain of Port, Balboa, Canal Zone.
1903	P. C. Taisey, . . . .	Brockton, . .	Lieutenant (junior grade).	U. S. S. "Mt. Vernon."
1904	Chas. H. Stoddard, . .	Worcester, . .	Lieutenant (junior grade).	U. S. S. "Guffey."
1904	Cyrus Barnes, . . . .	Malden, . . .	Lieutenant (junior grade).	U. S. S. "Remlik."
1905	Royal L. Barrows, . .	Boston, . . .	Lieutenant (junior grade).	U. S. C. G. C. "Gresham."
1906	Geo. C. Bossom, . . .	Reading, . .	Lieutenant (junior grade).	U. S. S. "Housatonic."
1907	Don Carlos C. Lewis, .	New Bedford, .	Lieutenant (junior grade).	U. S. S. "Algonquin."
1907	Archie E. Bragg, . . .	New Bedford, .	Lieutenant (junior grade).	U. S. S. "Saturn."
1908	Geo. H. Cameron, . . .	Wakefield, . .	Lieutenant (junior grade).	U. S. S. "Lake Daraga."
1909	Samuel J. Miller, . . .	Fall River, . .	Lieutenant (junior grade).	U. S. S. "Brutus."
1911	Henry O. K. Hanson, .	Neponset, . .	Lieutenant (junior grade).	U. S. S. "Buiten-zorg."
1911	Richard J. Routledge, .	Needham, . .	Lieutenant (junior grade).	Receiving Ship, New York City.
1911	Wm. M. Gorham, . . .	Winthrop, . .	Lieutenant (junior grade).	Base 18, Inverness, Scotland.
1912	Alex. G. Perkins, . . .	Newburyport, .	Lieutenant (junior grade).	U. S. S. "Achilles."
1913	Waldon A. McIntire, . .	Gloucester, . .	Lieutenant (junior grade).	U. S. S. "Yacona."
1913	Philip H. Waldron, . .	Leominster, . .	Lieutenant (junior grade).	- -
1913	John A. Maddock, . . .	Newburyport, .	Lieutenant (junior grade).	U. S. S. "Bali."
1914	James A. Stowell, . . .	Walpole, . . .	Lieutenant (junior grade).	U. S. S. "Santiago."
1914	F. Palmer Harrington, .	Malden, . . .	Lieutenant (junior grade).	U. S. S. "Mada-waska."
1914	Lester B. Poole, . . .	Marlborough, .	Lieutenant (junior grade).	U. S. S. "Mercurius."
1914	James A. Sweeney, . . .	E. Boston, . .	Lieutenant (junior grade).	- -
1915	Bernhardt Gerecke, . .	Boston, . . .	Lieutenant (junior grade).	U. S. S. "Drechterland."
1915	Clarence E. Stevens, . .	W. Barnstable, .	Lieutenant (junior grade).	U. S. S. "Ohioan."
1916	Percy C. Stevens, . . .	W. Barnstable, .	Lieutenant (junior grade).	U. S. S. "Canibas."
1916	Gerard R. Crosby, . . .	Orleans, . . .	Lieutenant (junior grade).	U. S. S. "Minnesota."
1916	Richard H. Dunphe, . .	Elmwood, . . .	Lieutenant (junior grade).	U. S. S. "Louisville."
1916	Henry A. Guba, . . . .	New Bedford, .	Lieutenant (junior grade).	U. S. S. "Orizaba."
1916	Paul Gorman, . . . .	Haverhill, . .	Lieutenant (junior grade).	U. S. S. "Lake Powawaukee."
1916	William E. Lord, . . .	Springfield, . .	Lieutenant (junior grade).	U. S. S. "Buiten-zorg."
1916	J. Prescott Mahoney, . .	W. Wareham, . .	Lieutenant (junior grade).	U. S. S. "Wanderer."
1916	Frank M. Perrin, . . .	Worcester, . .	Lieutenant (junior grade).	U. S. S. "Mexican."

*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1917	Arthur S. Phelan, . . .	Lynn, . . .	Lieutenant (junior grade).	U. S. S. "Swallow."
1918	Wm. H. Fitzgerald, . .	Revere, . . .	Lieutenant (junior grade).	U. S. S. "Arizonan."
1918	Harry Levine, . . . .	Cambridge, .	Lieutenant (junior grade).	U. S. S. "W. L. Steed."
1900	Ressie E. Bowser, . . .	No. Abington, .	Ensign, . . .	U. S. S. "Nero."
1902	Ernest L. Saunders, . .	Brockton, . .	Ensign, . . .	U. S. S. "Justin."
1904	William A. Danforth, .	Dorchester, .	Ensign, . . .	Receiving Ship, Ellis Island, N. Y.
1904	Harold J. Dunne, . . .	Canton, . . .	Ensign, . . .	Pelham Bay, N. Y.
1904	Leo W. Twombly, . . .	Jamaica Plain, .	Ensign, . . .	- -
1905	Laurence G. Kelley, . .	Taunton, . .	Ensign, . . .	U. S. S. "Ohioan."
1906	Cassius E. Cushman, . .	Rockport, . .	Ensign, . . .	U. S. S. "Shawmut."
1907	Frederick M. Coughlan, .	No. Dartmouth, .	Ensign, . . .	U. S. S. "Kroonland."
1907	Jos. R. Wier, . . . .	Sandersville, .	Ensign, . . .	U. S. S. "Nero."
1909	William E. Caddigan, . .	Dorchester, . .	Ensign, . . .	Commonwealth Pier.
1909	William H. Doyle, . . .	Malden, . . .	Ensign, . . .	- -
1910	Ernest B. Wyatt, . . .	Wakefield, . .	Ensign, . . .	U. S. S. "Vulcan."
1910	William Bowen, . . . .	Boston, . . .	Ensign, . . .	U. S. S. "Bunker Hill."
1911	George L. Lockhart, . .	Wakefield, . .	Ensign, . . .	U. S. S. "Orion."
1911	Angelo A. Aicardi, . . .	So. Boston, . .	Ensign, . . .	U. S. S. "Hawaiian."
1912	Albert H. Acorn, Jr., . .	Quincy, . . .	Ensign, . . .	U. S. S. "Corsair."
1912	Richard J. Cavanaugh, .	New Bedford, .	Ensign, . . .	U. S. S. "Antilla."
1912	Harold L. Winslow, . . .	Canton, . . .	Ensign, . . .	U. S. S. "Choctaw."
1913	Jos. D. Deneen, . . . .	New Bedford, .	Ensign, . . .	Material Officer, New London, Conn.
1913	Nils J. Peterson, . . . .	Brockton, . .	Ensign, . . .	U. S. S. "Proteus."
1913	Frank H. Nelson, . . . .	Fall River, . .	Ensign, . . .	- -
1913	Gregory B. Nichols, . . .	Danvers, . . .	Ensign, . . .	- -
1914	Wm. H. Fogarty, . . . .	Dorchester, .	Ensign, . . .	U. S. S. "Mundetta."
1914	C. Harold Peterson, . . .	Norwood, . . .	Ensign, . . .	- -
1914	Nelson T. Nutter, . . . .	Newburyport, .	Ensign, . . .	U. S. S. "Brompton."
1914	W. Harvey Orcutt, . . .	Winthrop, . .	Ensign, . . .	- -
1914	Richard S. Tewksbury, .	Winthrop, . .	Ensign, . . .	U. S. S. "Wissahickon."
1915	Curtis C. Fales, . . . .	Westborough, .	Ensign, . . .	U. S. S. "Cuyama."
1915	Laurence E. Burns, . . .	Winthrop, . .	Ensign, . . .	- -
1915	Wilfred C. Herron, . . .	Lawrence, . .	Ensign, . . .	U. S. S. Muscatine."
1915	Osgood R. Flagg, . . . .	Southborough, .	Ensign, . . .	U. S. S. P. No. 17.
1915	Russell C. Damon, . . .	Quincy, . . .	Ensign, . . .	- -
1916	John A. Rylander, . . .	Springfield, .	Ensign, . . .	U. S. S. "Arizonan."
1916	Byron H. Paine, . . . .	New Bedford, .	Ensign, . . .	Newport, R. I.
1916	Howard U. Chase, . . .	Nantucket, . .	Ensign, . . .	- -



*Enrolled in the United States Naval Reserve Force — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1916	Randall F. Elder, . . .	Everett, . . .	Ensign, . . .	U. S. S. "Konign Dernerderlinden."
1916	Harold W. Sanford, . .	Springfield, .	Ensign, . . .	-
1916	John E. Pilkington, . .	Mansfield, . .	Ensign, . . .	U. S. S. "Edw. Pierce."
1916	Peter J. Jakmauh, . . .	So. Boston, . .	Ensign, . . .	U. S. S. "W. L. Steed."
1916	William W. Thomas, . .	Randolph, . . .	Ensign, . . .	U. S. S. "Choctaw."
1916	Paul Gorman, . . . .	Haverhill, . .	Ensign, . . .	U. S. S. "Californian."
1917	Stanley F. Roberts, . .	Springfield, .	Ensign, . . .	U. S. S. "Sara Thompson."
1917	Frank M. Moore, . . .	Forest Hills, .	Ensign, . . .	-
1917	Richard H. Hopkins, . .	Somerville, . .	Ensign, . . .	U. S. S. "Montclair."
1917	Russell W. Thresher, . .	Southbridge, .	Ensign, . . .	-
1917	Earl S. Francis, . . .	Athol, . . . .	Ensign, . . .	U. S. S. "Lake Frances."
1917	Chas. R. Dennen, . . .	Gloucester, . .	Ensign, . . .	U. S. S. "Geo. Washington."
1917	Bradford S. Wilson, . .	Quincy, . . . .	Ensign, . . .	U. S. S. "Mercury."
1917	John T. Foye, . . . .	Bridgewater, .	Ensign, . . .	-
1917	Wm. M. Preston, . . .	Beverly, . . .	Ensign, . . .	-
1918	Wesley C. Clark, . . .	Arlington Heights.	Ensign, . . .	Naval Steam Engineering School, Hoboken, N. J.
1918	Raphael W. Hill, . . .	Provincetown, .	Ensign, . . .	-
1906	Raymond T. Gerrard, . .	Springfield, .	Chief quarter-master.	-
1911	Clifford Bailey, . . . .	Ludlow, . . . .	Chief quarter-master.	U. S. S. "Sapphire."
1914	Henry S. Ruggles, . . .	Winthrop, . . .	Chief quarter-master.	U. S. S. "Parker."
1917	Percy A. Crosbie, . . .	Everett, . . . .	Chief quarter-master.	U. S. S. "Reina Mercedes."
1916	Albert Bianchi, . . . .	Worcester, . . .	First class quarter-master.	U. S. S. "Canibas."
1916	Harold S. Ireland, . . .	Somerville, . .	First class quarter-master.	-
1909	S. Philip Grimshaw, . .	So. Dartmouth,	Chief boatswain's mate.	Fairhaven, Mass.
1910	Archibald W. Older, . .	Swampscott, . .	Chief boatswain's mate.	Hingham, Mass.
1911	Roy A. Whittemore, . . .	Malden, . . . .	Chief boatswain's mate.	-
1913	John W. Crocker, . . .	Nahant, . . . .	Chief boatswain's mate.	U. S. S. "Merimar."
1918	Edgar G. Glines, . . .	Beverly, . . . .	Chief boatswain's mate.	U. S. N. A. Shipping Depot, Dublin.
1918	Stuart R. Colson, . . .	Whitman, . . .	Chief boatswain's mate.	-
1916	John T. Crowell, . . .	Gloucester, . .	Boatswain's mate,	Ellis Island, N. Y.
1912	James C. Fawcett, . . .	Dorchester, . .	Second class boatswain's mate.	-
1916	Richard H. McKey, . . .	Wonalancet, . .	-	U. S. S. "Lamson."
1904	Ernest W. Williams, . .	Lynn, . . . .	Warrant machinist.	U. S. N. Steam Engineering School, Hoboken, N. J.
1904	Benj. L. Welch, . . . .	Salem, . . . .	Warrant machinist.	U. S. S. "Mongolia."
1904	Chas. H. Hill, Jr., . .	Reading, . . .	Warrant machinist.	U. S. S. "Salem."

*Enrolled in the United States Naval Reserve Force — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1915	Philip J. Durney, . . .	Gloucester, . .	Warrant machinist.	U. S. S. "Choctaw."
1916	C. Edwin Berglund, . .	Brockton, . .	Warrant machinist.	U. S. S. "Aroostook."
1917	Ernest C. Jensen, . . .	Provincetown, .	Warrant machinist.	- -
1896	Harry L. Giles, . . .	Everett, . . .	Chief machinist's mate.	U. S. S. "America."
1899	Vernon R. Tower, . . .	Hanover, . .	Chief machinist's mate.	U. S. S. "Freelance."
1915	Edw. B. Sheridan, . .	Lowell, . . .	Chief machinist's mate.	Steam Engineering School, Pelham Bay, N. Y.
1916	Alex. J. Phillips, . . .	Easton, . . .	Chief machinist's mate.	U. S. S. "O'Brien."
1918	Bernard F. Hurl, . .	Stoneham, . .	Chief machinist's mate.	- -
1903	Martin H. Greeley, . .	So. Boston, . .	First class machinist's mate.	U. S. S. "Kittery."
1916	Leo A. Benhard, . . .	Springfield, .	First class machinist's mate.	U. S. Armory, Springfield.
1916	Joseph A. Bain, . . .	Lawrence, . .	First class machinist's mate.	- -
1904	Chas. A. Hill, . . .	Melrose, . . .	Second class machinist's mate.	- -
1916	Jos. P. Condrey, . . .	Lowell, . . .	Second class machinist's mate.	U. S. S. "Birmingham."
1915	Mark E. Linehan, . .	No. Easton, .	Mechanician, . .	Naval aviation.
1912	Joseph B. Sylvaro, . .	Nantucket, . .	First class electrician.	Nantucket, Mass.

*In the United States Navy.*

1898	Clarence E. Wood, . .	Fall River, . .	Commander, . .	United States Naval Air Station, Pensacola, Fla.
1896	Herbert E. Kershaw, .	Lawrence, . .	Lieutenant, . .	Portsmouth, N. H.
1898	Herbert E. Fish, . . .	Mattapoisett, .	Lieutenant, . .	Quincy, Mass.
1902	John F. Murphy, . . .	Worcester, . .	Lieutenant, . .	U. S. S. "Powhatan."
1907	Thomas Baxter, . . .	So. Dennis, . .	Lieutenant, . .	- -
1914	Oliver P. Shattuck, . .	So. Acton, . .	Lieutenant (junior grade).	U. S. S. "Syalia."
1915	Leland Marshall, . . .	Revere, . . .	Lieutenant (junior grade).	U. S. S. K 8.
1910	Russell H. Sullivan, .	Westfield, . .	Pay clerk, . . .	U. S. S. "Beukelsdijk."
1909	Robert F. Hines, . . .	E. Boston, . .	- -	U. S. S. "Wainwright."
1902	George Castle, . . .	Lynn, . . .	Boatswain, . .	U. S. S. "Von Steuben."
1904	C. George Dyson, . . .	Billerica, . .	Electrical gunner,	U. S. S. "Camden."
1911	Jerome W. Hill, . . .	Chicopee, . .	Warrant gunner, .	U. S. S. "Brutus."
1910	Geo. F. Griswold, . . .	Watertown, . .	Gunner's mate, .	U. S. S. "Chester."
1896	William F. Gourville, .	Everett, . . .	Machinist, . . .	Portsmouth, N. H.
1903	C. Allan Holbrook, . .	Marlborough, .	Machinist, . . .	U. S. S. "Oregon."
1906	William R. Dolan, . .	Worcester, . .	Chief electrician,	U. S. S. "Patterson."
1906	Carroll L. Morgan, . .	Beverly, . . .	Chief electrician,	U. S. S. "Ericsson."
1900	Hugh H. McDonagh, . .	Worcester, . .	Electrician, . .	U. S. S. "Caesar."



*In the United States Navy — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1903	Fred S. Garland, . . .	Randolph, . . .	Electrician, . . .	U. S. S. "Alabama."
1903	Guy H. Hudson, . . .	Somerville, . . .	Electrician, . . .	U. S. S. "Alabama."
1906	Louis H. Houghton, . .	Worcester, . . .	Electrician, . . .	U. S. S. "Missouri."
1907	Eugene E. Chaney, . .	Arlington, . . .	Electrician, . . .	U. S. S. "North Dakota."
1907	Louis L. LaMontagne, .	Millers Falls, . .	Electrician, . . .	U. S. S. "Pilgrim."
1910	Howell S. Loundes, . .	Worcester, . . .	Electrician, . . .	U. S. S. "Georgia."
1911	Walter P. Lynn, . . .	Beverly, . . .	Electrician, . . .	U. S. S. "Birmingham."
1909	Frederick H. H. Sylvia, .	Nantucket, . . .	Chief watertender,	U. S. S. "Ozark."
1911	Levi E. MacLeod, . . .	Gloucester, . . .	Oiler, . . . . .	U. S. S. "Ossipee."

*Officers in the United States Marine Corps.*

1903	Leander A. Clapp, . . .	Brockton, . . .	Major, . . . . .	Quantico, Va.
1906	Clarence E. Nutting, . .	Cambridge, . . .	Major, . . . . .	- -
1915	Edward R. Rhodes, . . .	Lowell, . . . . .	Captain, . . . . .	Quantico, Va.

*Officers in the United States Coast Guard Service.*

1899	James A. Alger, . . .	Reading, . . .	Captain, . . . . .	U. S. S. "DeKalb."
1895	Philip W. Lauriat, . . .	Medford, . . .	First Lieutenant,	U. S. S. "Canandaigua."
1906	William F. Towle, . . .	Boston, . . . . .	First Lieutenant,	U. S. S. "Androscoggin."
1897	Lorenzo C. Farwell, . .	Dorchester, . . .	Captain of Engineers.	Recruiting officer, New York City.
1897	Albert F. Patterson, . .	Townsend, . . .	First Lieutenant of Engineers.	U. S. S. "Manning."
1896	Webb S. Maglathlin, . .	Bridgewater, . .	Second Lieutenant of Engineers.	U. S. S. "Snohomish."
1906	Henry C. Roach, . . .	New Bedford, . .	Second Lieutenant of Engineers.	U. S. S. "Androscoggin."
1907	Paul R. Smith, . . . . .	Concord, . . . .	Third Lieutenant of Engineers.	Inspector of machinery, Brooklyn, N. Y.

*United States Steamboat Inspection Service.*

1902	Herman T. Parker, . . .	Rockport, . . .	Inspector of hulls,	Boston, Mass.
1896	Alvin W. Haynes, . . .	Somerville, . . .	Assistant inspector of hulls.	New York, N. Y.
1900	James S. Howes, . . . .	Woods Hole, . . .	Assistant inspector of hulls.	Boston, Mass.
1909	William A. Sillars, . . .	Danvers, . . . . .	Assistant inspector of hulls.	Providence, R. I.
1899	Frank B. Davis, . . . .	Dorchester, . . .	Assistant inspector of boilers.	New Orleans, La.
1900	James F. Rawdon, . . .	Worcester, . . . .	Assistant inspector of boilers.	Boston, Mass.

*Officers in the United States Lighthouse Service.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1896	George E. Eaton, . . .	Wakefield, . .	Captain, . . .	"Anemone."
1904	John F. Williamson, . .	Brockton, . .	Captain, . . .	"Columbine."
1905	Harry W. Maynard, . .	Winthrop, . .	Captain, . . .	"Hyacinth."
1910	Chester R. Morris, . .	Springfield, .	First officer, .	"Lilac."

*In the Hydrographic Office, Navy Department.*

1896	Charles S. Young, . . .	Boston, . . .	Nautical expert, .	Washington.
1913	Geo. W. Sullivan, . . .	New Bedford, .	Nautical expert, .	Washington.

*In the United States Army.*

1894	F. W. Galbraith, Jr., . .	Springfield, .	Colonel, . . .	Commanding 147th Infantry.
1906	Chas. W. Hames, . . .	Melrose, . . .	Lieutenant, . .	-
1915	Frank L. Nimmo, . . .	Cambridge, .	Corporal, . . .	1st C. A. C., Ft. Sherman, Canal Zone.
1901	Wm. R. Bolton, . . .	Springfield, .	Private, . . .	Co. F, 112th U. S. Engineers.
1910	Paul Case, . . . . .	Brockton, . .	-	U. S. Army Hosp. No. 6, A. E. F.
1911	Walter H. Blanchard, .	Gloucester, .	-	101st Supply Train, 26th Div., A. E. F.
1912	Richard K. O'Connell, .	No. Easton, .	Private, . . .	Co. E, 301st Engineers.
1913	Elmer D. Taggart, . .	Wakefield, . .	Private, . . .	Camp Gordon, Atlanta, Ga.
1913	Firth B. Andrews, . .	Melrose, . . .	-	102d Machine Gun Battalion.
1914	Wesley H. Burton, . .	Plainville, . .	Private, . . .	101st Reg., A. E. F.
1915	Charles Pope, . . . .	Springfield, .	-	146th F. A.

## APPROPRIATIONS.

The appropriations for the school for the fiscal year 1918, from Dec. 1, 1917, to Nov. 30, 1918, are here accounted for as follows: —

*Current Expenses.*

Appropriation, . . . . .	\$70,000 00
Expended: —	
Pay roll, . . . . .	\$32,195 12
Provisions, . . . . .	23,284 21
Seamanship department, . . . . .	3,911 96
Engineering department, . . . . .	5,055 05
Instruction, . . . . .	1,168 62
Miscellaneous, . . . . .	4,146 78
Total amount expended, . . . . .	<hr/> 69,761 74
Balance unexpended, . . . . .	\$238 26

*Office Expenses.*

Appropriation, . . . . .	\$6,300 00
Expended: —	
Salaries, . . . . .	\$3,456 67
Rent of office, and janitor's service, . . . . .	1,097 00
Printing, . . . . .	455 28
Stationery and postage, . . . . .	555 01
Telephone and telegrams, . . . . .	194 03
Commissioners' expenses, . . . . .	190 40
Miscellaneous, . . . . .	290 31
Total amount expended, . . . . .	<hr/> \$6,238 70
Less amount allowed by Retirement Association, . . . . .	3 27
	<hr/> 6,235 43
Balance unexpended, . . . . .	\$64 57

Respectfully submitted,

FRANCIS T. BOWLES, *Chairman.*  
WILLIAM E. MCKAY.  
CLARENCE E. PERKINS.



TWENTY-EIGHTH ANNUAL REPORT  
OF  
THE COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL  
SCHOOL

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JANUARY 1, 1920

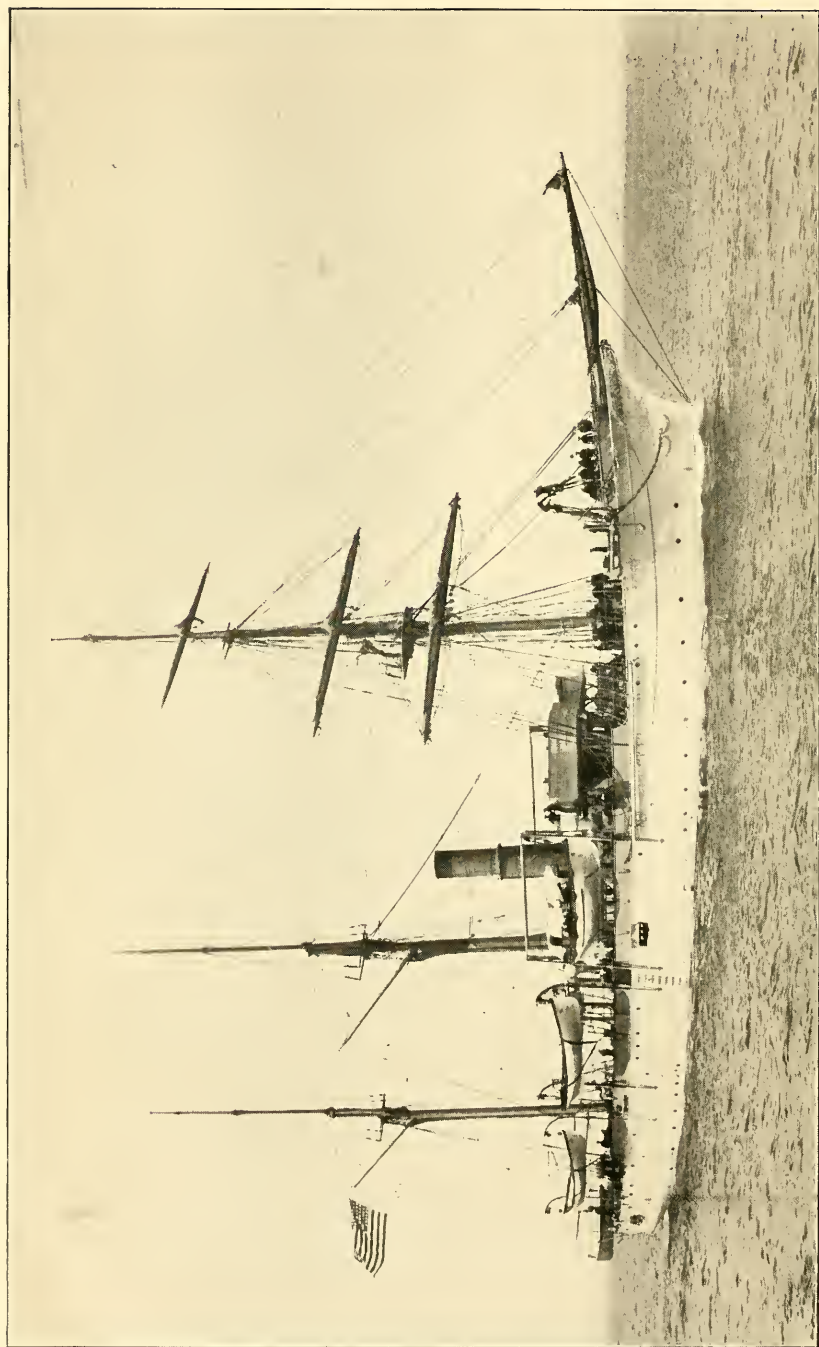


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The "Nantucket" leaving Boston on the Annual Summer Cruise.

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PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

COMMISSIONERS  
OF THE  
MASSACHUSETTS NAUTICAL SCHOOL

2A PARK STREET, BOSTON

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FRANCIS T. BOWLES, *Chairman*  
WILLIAM E. MCKAY  
CLARENCE E. PERKINS

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WILLIAM H. DIMICK, *Secretary*



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# The Commonwealth of Massachusetts

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## MASSACHUSETTS NAUTICAL SCHOOL.

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*To the Senate and House of Representatives of the Commonwealth of Massachusetts.*

The Commissioners have the honor to submit their report of the operation of the school for the year 1919.

### THE COURSE OF INSTRUCTION AND THE DEMANDS UPON THE SCHOOL.

The Massachusetts Nautical School offers instruction in seamanship, navigation and marine engineering to the sons of citizens of the Commonwealth. Graduates are qualified for service as deck and engineer officers in the American merchant marine. The school ship is the U. S. S. "Nantucket," a vessel loaned to the Commonwealth by the Navy Department. Students are admitted in the spring and autumn, and the course of instruction covers two years. Students are required to deposit \$130 the first year and \$25 the second year for the cost of clothing and books.

During the year diplomas of graduation have been delivered to 37 young men qualified for deck officers and to 18 qualified for engineer officers in the merchant marine, and 50 of this year's graduates are already employed in such capacities.

The graduates of this school, during its twenty-eight years of existence, number 903, and there are in maritime service to-day about 900 either graduates or those who have received instruction in the nautical school. The seagoing personnel of the United States Shipping Board includes 9,184 deck and engineer officers, and therefore the Massachusetts Nautical School

has furnished the equivalent of nearly 10 per cent of the whole force, — an achievement highly creditable to the efficiency of the school and the liberality of the Commonwealth.

### *Age Limit of Applicants.*

The wisdom of the action taken last year in changing the minimum age of applicants from sixteen to seventeen years is becoming more and more apparent. The work of the quartermaster is gradually being taken over by the seaman. At the present time quartermasters are employed on large ships only, making it difficult for an unlicensed graduate to obtain a suitable start in his seafaring career. With the new age limit, all graduated become eligible at once for an officer's certificate.

### THE AMERICAN MERCHANT MARINE.

The following significant shipping facts are taken from a report submitted Nov. 6, 1919, to the House of Representatives by the Committee on Merchant Marine and Fisheries: —

America's rapid advance from an inconsequential place among the maritime nations to the post of leadership in shipbuilding was not only phenomenal, but is a fair augury for the permanence of its new merchant marine built under the stress of the war. At the outbreak of the world struggle merchant-marine construction had almost become a lost art in this country. To-day this Nation has more ship workers, more shipyards, more shipways, more vessels under construction, and is turning them out more rapidly and in greater numbers than now issue from all the other shipyards of all the world.

As the premier shipbuilding nation of the world America attained her place in one giant stride. Up to the outbreak of the war we had only 15 vessels of 1,000 tons and over engaged in oversea trade. To-day the American flag floats from 1,280 ocean-going steamships, 1,107 of which had been built by the United States Shipping Board within the last two years.

In June, 1914, the total gross tonnage under the American flag, including coastwise shipping and the fleet operating on the Great Lakes, was 4,287,000 tons.

In June, 1919, its gross tonnage was 11,983,000, an increase to 278 per cent, chiefly in ocean-going steamships.

The steam tonnage under the American flag is now 24.8 per cent of the steam tonnage of the world. The figures are shown in the following tables.

The world steam tonnage of 100 gross tons and over on June 30, 1919, as reported by Lloyds, was —

NUMBER OF VESSELS.	TONNAGE.	
	Gross.	Dead Weight.
24,386, . . . . .	47,897,000	71,845,500

American steam tonnage of 100 gross tons and over on June 30, 1919, including tonnage on Great Lakes, was —

NUMBER OF VESSELS.	TONNAGE.	
	Gross.	Dead Weight.
3,687, . . . . .	11,983,000	17,974,500

Per cent of world steam tonnage of 100 gross tons and over under United States flag June 30, 1919: —

Per cent of number, . . . . .	15.1
Per cent of tonnage, . . . . .	24.8

The above percentage figures include tonnage on the Great Lakes.

In the four years preceding the war the shipyards of this country turned out a total of 107 seagoing vessels (of 1,500 tons and over, chiefly coast-wise). This construction represented 805,037 dead-weight tons.

During 1918, a period when the Shipping Board was getting into its stride, there were launched from the yards under its control a total of 4,216,656 dead-weight tons, five times more than had been built in the four pre-war years. During the year 1918 shipyards under control of the Shipping Board delivered 3,107,093 dead-weight tons of completed ships.

From Jan. 1 to Aug. 29, 1919, 3,983,135 dead-weight tons of shipping have been launched and 3,845,140 dead-weight tons delivered, a total for the twenty months (since the beginning of 1918) of 8,199,791 tons launched and 6,952,233 delivered.

The following work remains to be completed: —

	TONNAGE.	
	Gross.	Dead Weight.
Completion of vessels launched but not delivered, . . .	1,280,483	1,920,724
Completion of vessels whose keels have been laid, . . .	2,190,736	3,286,105
Completion of vessels under contract, . . . . .	984,407	1,476,610
Total, . . . . .	4,455,626	6,683,439

## THE WORK IN GENERAL.

During the war the U. S. S. "Nantucket" remained subject to the orders of the Navy Department and was armed and munitioned for patrol service, but was permitted to remain for the purposes of the school under the immediate direction of the Commissioners. On June 20, 1919, the Navy Department returned the "Nantucket" to the custody of the Commonwealth.

The Commissioners regret to report that twice during the year the position of superintendent has become vacant: once by the sudden death of Commander Charles N. Atwater, U. S. N., retired, on April 22, 1919, and again on July 3, 1919, when Capt. P. W. Hourigan, U. S. N., retired, was forced to relinquish the work on account of ill health.

Captain Atwater was well qualified by previous education and training for his work with the school. He served on many naval training ships, and was superintendent of the Pennsylvania Nautical School, in command of the U. S. S. "Saratoga" and U. S. S. "Adams" for several years.

The following resolution was adopted by the Commissioners: —

*Resolved*, The Commissioners, on receiving information of the sudden and entirely unexpected death of Commander C. N. Atwater, U. S. N., retired, which occurred yesterday at 1.35 P.M. on board the U. S. S. "Nantucket," lying at the navy yard in Boston, desire to record the fact that he had been up to the last moment in full and efficient performance of his duty as superintendent of the Nautical School, which he carried out with the conscientious care and distinction corresponding to his high character and ability. Commander Atwater had served as superintendent from April 1, 1911, to April 30, 1915, and from Aug. 14, 1918, to April 22, 1919, constituting a total service to the Commonwealth of four years and eight months. The Commissioners, therefore, with full knowledge desire to express to his widow and family their sense of the great loss which the school has experienced, and their sincere and profound sympathy. It is ordered that this resolution shall be recorded in the minutes and copies transmitted to Mrs. Atwater and to the Navy Department for record.

Captain Hourigan was superintendent of the school from April 26, 1915, to April 30, 1918, and again from April 28 to July 23, 1919. The Commissioners accepted his resignation

with great regret, as he not only brought to the school the highest professional ability, but his high personal character won the respect and esteem of all with whom he associated.

Commander Howard G. Copeland, U. S. N. R. F., executive officer, served as acting superintendent from July 3, 1919, the time Captain Hourigan relinquished the work, until July 24, 1919, when Capt. Armistead Rust, U. S. N., retired, reported on board. He performed the duties of the position in a most energetic and efficient manner.

The Commissioners were fortunate in securing the services of Capt. Armistead Rust, U. S. N., retired, as superintendent of the school. He is an officer of experience in the United States Navy, having served in the Naval Training Service on the U. S. S. "Saratoga," "Constellation" and "Jamestown," full-rigged sailing vessels without steam power. He is a recognized expert in theoretical and practical navigation, and through his efforts many improvements have occurred in the art. He has invented a number of instruments designed to benefit the naval service, among the most important of which is a range finder. He is the author of "Practical Tables for Navigators and Aviators," used by the United States Navy and the United States Shipping Board.

#### THE SCHOOL RECORD.

During the past year there have been 193 students on the rolls of the school. They came from 77 cities and towns of the Commonwealth, as follows: —

Bedford, . . . . .	1	Dennis, . . . . .	1
Beverly, . . . . .	2	Duxbury, . . . . .	2
Boston, . . . . .	29	East Brewster, . . . . .	1
Brockton, . . . . .	2	East Methuen, . . . . .	1
Brookfield, . . . . .	2	Edgartown, . . . . .	1
Brookline, . . . . .	1	Everett, . . . . .	4
Cambridge, . . . . .	4	Fairhaven, . . . . .	1
Chester, . . . . .	1	Fall River, . . . . .	4
Clifftondale, . . . . .	1	Fitchburg, . . . . .	3
Concord, . . . . .	1	Framingham, . . . . .	1
Cotuit, . . . . .	1	Gloucester, . . . . .	3
Danvers, . . . . .	1	Harvard, . . . . .	1
Dedham, . . . . .	1	Haverhill, . . . . .	1



Holyoke, . . . . .	5	Readville, . . . . .	1
Hyannisport, . . . . .	1	Revere, . . . . .	3
Lawrence, . . . . .	8	Rockland, . . . . .	2
Lowell, . . . . .	8	Rockport, . . . . .	1
Lunenburg, . . . . .	1	Salem, . . . . .	2
Lynn, . . . . .	7	Sharon, . . . . .	1
Malden, . . . . .	2	Somerville, . . . . .	9
Manchester, . . . . .	1	South Braintree, . . . . .	1
Mansfield, . . . . .	2	South Dartmouth, . . . . .	2
Marion, . . . . .	1	South Hanson, . . . . .	1
Marlborough, . . . . .	1	Springfield, . . . . .	7
Medford, . . . . .	7	Stoneham, . . . . .	4
Melrose, . . . . .	3	Stow, . . . . .	1
Montello, . . . . .	1	Taunton, . . . . .	3
Nahant, . . . . .	2	Vineyard Haven, . . . . .	1
Nantucket, . . . . .	2	Waltham, . . . . .	1
New Bedford, . . . . .	2	Watertown, . . . . .	2
Newton, . . . . .	2	Wellfleet, . . . . .	1
North Andover, . . . . .	1	West Falmouth, . . . . .	1
North Carver, . . . . .	1	Weston, . . . . .	2
North Easton, . . . . .	2	Westwood, . . . . .	1
Peabody, . . . . .	1	Winthrop, . . . . .	3
Pigeon Cove, . . . . .	2	Woburn, . . . . .	1
Plymouth, . . . . .	1	Woods Hole, . . . . .	1
Provincetown, . . . . .	1	Worcester, . . . . .	4
Quincy, . . . . .	1		

Their previous education was as follows: high schools, 174; academies, 9; technical schools and business colleges, 7; colleges, 1; grammar schools, 2.

The average age of the cadets at entrance was seventeen years and six months. The number of cadets enrolled in the school at present is 116, this being the largest number the "Nantucket" can accommodate.

#### WINTER TERM.

Good results were obtained from the theoretical and practical work, during the winter term, while the ship was berthed at the North End Park. The Friday evening lectures, supplemental to the regular studies, were continued, and proved to be of real value.

### SUMMER CRUISE.

The prohibitive prices for coal and other supplies, and the unfavorable conditions existing in European ports following the war, made it necessary to continue the practice of the past four years and limit the cruise to coastal waters. The cruise extended as far south as Norfolk and north as far as Halifax, N. S. A detailed account of the cruise is given in the superintendent's report. Many courtesies were extended to the officers and cadets at the ports visited, especially at Halifax, Philadelphia and Nantucket. The Commissioners believe, however, that a foreign cruise is better adapted for the practical purposes of the school, and hope that during the coming year conditions will be such as to permit of the usual ocean cruise.

### GRADUATION EXERCISES.

The spring graduation exercises were held at Boston on April 17, when the principal address was made by Hon. Channing Cox, Lieutenant Governor of the State. Twenty-six graduates received diplomas. The autumn exercises were held on September 23, when Dr. Payson Smith, the Massachusetts Commissioner of Education, addressed the cadets. Diplomas of graduation were awarded to 29, bringing the total number of graduates to 903.

### RECOGNITION OF COURTESIES.

The Commissioners desire to express their appreciation of the courtesies extended by Rear Admiral S. S. Robison, U. S. N., commandant of the navy yard, Boston, and their thanks to President Matthew C. Brush and Mr. Charles E. Eaton in giving the officers and cadets of the school an opportunity to inspect every detail of the work and organization of the great shipbuilding plant at Hog Island, Philadelphia, Pa.

### THE NEEDS OF THE SCHOOL.

Since the establishment of the nautical school by act of the Legislature, June 11, 1891, or during twenty-eight years, the Commissioners have never asked the Legislature for any capital expenditure and only for such sum as was actually necessary



for the maintenance of the school, all the activities of which were maintained on board the ship loaned for the purpose by the national government. During recent years the application for cadetships by the sons of citizens of the Commonwealth have largely exceeded the accommodations, and there have been enrolled in the school the maximum number, 116, which the ship will accommodate.

The park and recreation commissioners of the city of Boston have for many years granted the State the privilege of using a pier at the North End Park, for the berthing of the school ship from October to April, and the use of several rooms in the bathhouse adjacent to the pier for storage and school purposes. These accommodations are provided at an annual rental of \$800. The school is principally carried on, however, on board the "Nantucket," the spar deck being housed over for the winter, making it available for study and recitation. It would be difficult, if not impossible, to maintain this school work on board the ship, and at the same time subsist and lodge the officers, crew and 116 cadets, without the use of the temporary additional accommodations provided by the bathhouse. These accommodations, which necessarily cannot permit of any permanent arrangements which would interfere with the use of the bathhouse, — the whole of which is essential for the city during the summer, — are not properly adapted or rightly equipped for instruction purposes, and the cadets are not provided with any space for indoor drill or recreation during the severe winter months.

In view of these conditions the Commissioners are giving careful consideration to some plan which shall, with the least expense, provide sanitary facilities suitable to the growing importance of the school. The Commissioners hope to submit some practicable project which, with the co-operation of the Commonwealth and the city of Boston, will provide for suitable permanent accommodations at the North End Park.

#### LEGISLATION.

Chapter 350 of the General Acts of the Legislature, approved July 23, 1919, provides that the Commissioners of the Massachusetts Nautical School, existing under authority of chapter

45 of the Revised Laws and acts in amendment and in addition thereto, are hereby placed in and shall hereafter serve in the Department of Education.

#### NANTUCKET'S TESTIMONIAL.

The citizens of Nantucket, desiring to express in some concrete form their appreciation of the honor of having the ship named for the town of Nantucket, voted to present the ship with a bell. The presentation ceremonies were held on Sept. 17, 1919, at Nantucket, the ship being at anchor in the harbor of Nantucket on that date. The bell was presented to the ship by Hon. Arthur H. Gardner, chairman of the town committee, and accepted for the State by Capt. Armistead Rust, U. S. N., retired, superintendent of the school. The inscription on the bell is as follows:—

U. S. S. "Nantucket"  
Presented by the Town of Nantucket, Mass.  
September, 1919.

Nantucket's interest in the work of training young men for a seafaring life dates back to the year 1829, when Isaac Coffin, an admiral in the British Navy and a native of Nantucket, established a school on board the brig "Clio." The "Clio" made a two months' cruise to Quebec, with twenty-one pupils, touching at Pictou, N. S., and the Magdalen Islands.

#### EMERGENCY SERVICE.

On Jan. 15, 1919, the cadets of the school were suddenly called from their regular schedule to engage in patrol and rescue work. On that date a large tank containing molasses, located near the North End Park, collapsed, causing the destruction of many of the adjacent buildings and the loss of nineteen lives. Immediately after the disaster, and before the arrival of the fire department or police, the officers and cadets of the "Nantucket" were engaged in rescue work under the direction of Lieutenant Commander H. G. Copeland, U. S. N. R. F. Commander Charles N. Atwater, U. S. N., superintendent of the school, reporting upon the case, stated:—

The cadets moved fearlessly among the wreckage at a time when there were still falling partitions, and when no one knew what danger might be encountered from possible explosions. Trained navy men could have done no better and no more than these unpaid civilian pupils in the merchant marine.

The following letter of thanks was received from Hon. Andrew J. Peters, mayor of Boston:—

It is my privilege to extend to you and to the officers and men of your ship the most cordial thanks of the citizens of Boston for the splendid work done at the scene of the explosion in the North End yesterday.

Reports from every quarter have impressed upon me the gallantry of your men, and I feel certain but for their instant response and effective work the loss of life would have been far greater than it was. I assure you that you have our most sincere gratitude.

#### REPORT ON SUMMER CRUISE.

The following is the report of Capt. Armistead Rust, U. S. N., retired, on the summer cruise:—

The "Nantucket" left the navy yard, Boston, May 24, 1919, and, after calling at Provincetown and Nantucket, proceeded to Philadelphia, Pa. While at Nantucket the cadets were landed for the parade on Memorial Day.

Advantage was taken of the run down the coast to accustom the cadets to sea routine and standing watches. The commandant of the navy yard at Philadelphia, Rear Admiral C. F. Hughes, U. S. N., extended to the officers and cadets the privilege of inspecting the shops and vessels.

While at Philadelphia arrangements were made to have the cadets visit and inspect the Hog Island yard of the Emergency Fleet Corporation and the New York Shipbuilding Company's plant at Camden, N. J. The executive officer, accompanied by the chief engineer and other officers, conducted these parties, and the cadets were afforded an excellent opportunity to see at close range the various operations in ship construction. The kindly interest and painstaking efforts of the officials at Hog Island to make the visit to their plant instructive were particularly noticeable and highly appreciated. A special report on these visits was made by Capt. P. W. Hourigan, U. S. N., dated June 7, 1919.

From Philadelphia the ship proceeded to Gloucester, Mass. The Delaware River trip was of much benefit to cadets of the navigation classes, in that the opportunities for instruction in river navigation, running on ranges, and in the practical value of the aids to navigation of various kinds maintained by the Light House Service were very favorable. The passage from the Delaware Capes gave additional opportunities for the fourth class to become acquainted with sea routine.

At Gloucester the ship was completely painted and prepared for the Governor's inspection on June 18, 1919, at Boston. The Lieutenant Governor, Hon. Channing H. Cox, members of the Governor's Council and the Board of Commissioners of this school were present. The ship got under way, and exercises and drills were held off Graves Light, after which the ship returned to her anchorage.

The "Nantucket" proceeded to the navy yard for coal and supplies on June 19. While there, Capt. P. W. Hourigan, U. S. N., the Superintendent, was granted sick leave by the Board of Commissioners, and left the ship for treatment at the United States Naval Hospital, Chelsea. The executive officer, Commander H. G. Copeland, U. S. N. R. F., succeeded to the command of the ship and became acting superintendent.

The ship left the navy yard, Boston, on June 23, and proceeded to Nantucket, via Provincetown, where she arrived June 25 and remained until after July 4.

The next passage was from Nantucket to Vineyard Haven; thence to New Rochelle, N. Y., Gardiners Bay, New London, Newport, and to Melville, R. I., for coal.

On July 24 the "Nantucket" arrived at Woods Hole, where the writer reported on board and assumed command of the ship in virtue of having been appointed to the command and superintendent of the school by the Board of Commissioners from July 24, 1919.

Dr. I. L. Nowlan, medical officer, left the ship on sick leave to undergo treatment on July 26. The ship proceeded to Jamestown, R. I., on the 27th, in order that the superintendent might have an interview with Captain Hourigan on business concerning the school.

The "Nantucket" sailed for Halifax, N. S., at 7 A. M. on July 28, via Nantucket Shoal Light vessel and George's Bank. The passage was made with fair weather and a fair wind, and the cadets utilized the time devoted to practical navigation in taking sights of the sun, moon and stars. The first classmen were given charge of the bridge in the daytime, under the supervision of the officer of the deck, and were required to give all orders for handling sail and carrying on the routine. The ship arrived at Halifax about 7 P. M. on July 30. The superintendent made official calls on the United States consul general, the governor of Nova Scotia, and the superintendent of the dock yard. These calls were returned, and Governor Grant, in an address to the cadets, expressed his appreciation and that of the people of Halifax and Nova Scotia for the prompt and efficient aid rendered by the Commonwealth of Massachusetts to those injured in Halifax by the explosion of a munition ship on Dec. 8, 1917.

Halifax is an excellent port of call in the summer. It has a very fine harbor without strong currents, — most suitable for boat drill under sail and oars. The people received the cadets in a very hospitable manner ashore.

On sailing from Halifax at 7 P. M., August 6, for Boothbay Harbor, Me., a heavy fog was encountered outside the harbor, which was carried until about 10 A. M. on the 8th, the date of arrival at destination. The run was



made with the patent log and sounding machine, and the position verified, by a bearing from the Otter Cliffs Radio Compass Station on Mount Desert Island, about 7 P.M. on the 7th. Dr. M. A. Strammer reported on board for duty as medical officer on August 8.

At Boothbay Harbor Commander H. G. Copeland took a landing party ashore, marched about seven miles to a place where the camp equipage had been sent by boat, camped for the night, and marched back to the landing the next day.

After calling at Portland, Me., the ship visited Portsmouth, N. H., for coal, and on August 21 sailed for Annapolis, Md., where she arrived on August 26. On the passage to the Chesapeake, and while in the bay, all cadets of the first class were required to go through the evolutions of tacking and wearing ships, which were accomplished with the engines turning over slowly. As during this passage, and on the return to Gardiners Bay, only light and gentle breezes were had as a rule, it was at no time possible to proceed under sail alone, though it was carried whenever it would draw.

While cruising in Chesapeake Bay the first and second classes in navigation received practical instruction in coastwise navigation, plotting positions by cross bearings and sextant angles; and the third and fourth classes were given constant practice in heaving the lead.

In addition to the general engine-room routine the senior engineer cadets were given instruction and performed the actual work in the following: water tending, firing and oiling in port and at sea; adjusting of main engine bearings, including taking leads from the same; operating the evaporator and distilling plant; operating lathe; tempering tools; overhauling pumps; removing and replacing boiler tubes and plugging same; taking indicator diagrams and computing horse power. The third and fourth classes did coal passers' duty in details from the deck.

While at Annapolis, cadets who had not visited Washington and desired to do so were permitted to visit that city for the day, and 45 availed themselves of this opportunity.

On September 1 the ship sailed, via Yorktown, for Norfolk Va., for coal, thence to Greenport, L. I. Leaving Greenport on the 15th, and calling at Woods Hole for stores, the training ship arrived at Nantucket on the 16th. On September 17 the citizens of Nantucket presented a handsome bell to the ship, the presentation address being made by the Hon. Arthur H. Gardner, the chairman of the town committee.

The "Nantucket" left for Boston on September 19, and at 9 A.M. on September 20 made fast alongside the pier at North End Park. Graduating exercises were held on Sept. 23, 1919. Entrance examinations were held at the State House on the 25th, 26th and 27th of September.

Cadets were given leave to visit their homes, one-third remaining on board to build the house over the ship and secure her for the winter. Those who graduated took the examinations of the steamboat inspectors for third mate or third assistant engineer. All except two of the engineer graduates (one it is understood is not seeking employment at present, and the other, who is under age for his license, has been appointed a junior engineer at

\$120 per month) have secured positions not lower than third assistant engineers, and are receiving at least \$163.75 per month and "found." I understand that all of the graduates of the navigation class have also obtained good positions.

An earnest effort has been made by the officers of the ship to impress on the cadets the great opportunity this school offers them to obtain a secure footing in our merchant marine at a most advantageous time, due to the great expansion of this service, provided they apply themselves diligently to their studies and duties while in the school, and show, when reporting on board their ships after graduation, by their manners, bearing and knowledge of their profession, that they are the proper material for officers.

While coastwise cruising, such as was done last summer, has some advantages for piloting and chart work in navigation, and gives practice in handling ground tackle and opportunities for boat work under sail and oars, the deep-sea navigation and seamanship instruction of the cadets suffer on account of the very short trips and the amount of time spent in port, and also on account of the great amount of rain and fog encountered along the coast.

On account of the present expansion of our merchant marine, the graduates of this school will advance rapidly to positions of responsibility. As many of them will have the opportunity to become masters of deep-water ships in a few years, it is highly important to resume the deep-water cruises as soon as possible, in order that the cadets while here may get the maximum amount of practical navigation. If, on account of sanitary or other conditions in European ports or for any other reason, the Commissioners deem it inadvisable to make a European cruise next summer, a cruise to San Francisco, via the Panama Canal, is suggested. This would be a round trip of about 10,440 miles, or about the length of the European cruise. If this is thought inexpedient, a cruise could be made to the Azores and Madeira, returning via Barbados, Trinidad and St. Thomas.

#### MEDICAL DEPARTMENT.

The health of the cadets during the summer was very good. At the beginning of the cruise, thirty-one cadets received anti-typhoid inoculations. There were no cases of serious illness or accident.

#### COAL CONSUMPTION.

	Tons.
Coal on hand and received, . . . . .	605.8
Expended, . . . . .	500.7
Remaining Sept. 21, 1919, . . . . .	105.1

#### Itemized account of coal expended:—

Moving ship, . . . . .	288.9
Dynamos and auxiliary machinery, . . . . .	161.6
Distilling, . . . . .	41.9
Galley, . . . . .	8.3
Total, . . . . .	500.7

## STUDY SCHEDULE, WINTER TERM, 1919-20.

TIME.	Deck, First Class.	Deck, Second Class.	Engineers, First and Second Classes.	Third Class, First Section.	Third Class, Second Section.	Fourth Class, First Section.	Fourth Class, Second Section.
Monday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Seamanship. Study. Navigation. Study.	Study. Seamanship. Study. Navigation.	Electricity. Study. Steam. Study.	Study. English. Mathematics. Study.	Study. English. Study. Mathematics.	Mathematics. Study. Study. English.	Study. Mathematics. Study. English.
Tuesday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Mathematics. Study. Seamanship. Study.	Study. Mathematics. Study. Seamanship.	Electricity. Study. Mathematics. Study.	Navigation. Study. Steam. Study.	Study. Navigation. Study. Steam.	Study. English. Navigation. Study.	Study. English. Study. Navigation.
Wednesday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Study. English. Study. Navigation.	Study. English. Navigation. Study.	Electricity. Study. Steam. Study.	Seamanship. Study. Electricity. Study.	Study. Seamanship. Study. Electricity.	Steam. Study. Seamanship. Study.	Study. Steam. Study. Seamanship.
Thursday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Navigation. Study. Seamanship. Study.	Study. Navigation. Study. Seamanship.	Steam. Study. English. Study.	Mathematics. Study. Steam. Study.	Study. Mathematics. Steam.	Electricity. Study. Mathematics. Study.	Study. Electricity. Study. Mathematics.
Friday { 8.45-9.45, 9.45-10.45, 11.05-11.45, 11.45-12.25,	Navigation. Study. Mathematics. Study.	Study. Navigation. Study. Mathematics.	Study. Mathematics. Steam. Study.	Navigation. Study. English. Study.	Study. Navigation. English. Study.	Steam. Study. Navigation. Study.	Study. Steam. Study. Navigation.



## OFFICERS AND INSTRUCTORS OF THE SCHOOL.

The following are the officers and instructors now connected with the school:—

Superintendent and commanding officer, Capt. Armistead Rust, U. S. N., retired.

Executive officer, Commander Howard G. Copeland, U. S. N. R. F. (graduate M. N. S.).

Navigator, John W. Thompson (graduate M. N. S.).

Watch officer, Lieut. Ernest V. Sandstrom, U. S. N.

Watch officer, Nicolai Sivertsen.

Chief engineer, Ervin L. Kelley (graduate M. N. S.).

Assistant engineer, Calvin W. Simonds (graduate M. N. S.).

Medical officer, Myron A. Strammer, M.D.

Paymaster and captain's clerk, Adolph E. Salsburg.

## PERSONNEL.

*Appointments.*

NAME.	Title.	Date.
Clarence E. Perkins, . . . .	Commissioner, . . . .	July 1, 1919
Albert E. Small, . . . .	Assistant engineer, . . . .	Apr. 24, 1919
Capt. P. W. Hourigan, U. S. N., . .	Superintendent, . . . .	Apr. 28, 1919
Capt. Armistead Rust, U. S. N., . .	Superintendent, . . . .	July 24, 1919
Myron A. Strammer, M.D., . . . .	Medical officer, . . . .	Aug. 7, 1919
Calvin W. Simonds, . . . .	Assistant engineer, . . . .	Oct. 18, 1919

*Separations.*

NAME.	Title.	Date.
Comdr. Chas. N. Atwater, U. S. N.	Superintendent, . . . .	Died, Apr. 22, 1919.
John D. Shore, . . . .	Instructor in mathematics, .	Resigned, Apr. 30, 1919.
Capt. P. W. Hourigan, U. S. N.,	Superintendent, . . . .	Resigned, July 23, 1919.
Irvine L. Nowlan, M.D., . . . .	Medical officer, . . . .	Resigned, Aug. 26, 1919.
Albert E. Small, . . . .	Assistant engineer, . . . .	Resigned, Oct. 15, 1919.

# CADET OFFICERS OF THE MASSACHUSETTS NAUTICAL SCHOOL, 1919.

## SUMMER TERM.

Cronin, Walter J., *Senior Cadet Officer.*

### *Navigation.*

Bemis, Edmond F., . . . . *First Seaman Cadet Officer.*  
 Studley, William B., Jr., . . . . *Second Seaman Cadet Officer.*  
 Gosselin, Joseph W., . . . . *Third Seaman Cadet Officer.*

### *Engineering.*

Macintyre, Ronald G., . . . . *First Engineer Cadet Officer.*  
 Holmes, Carl W., . . . . *Second Engineer Cadet Officer.*  
 Morin, Edward H., . . . . *Third Engineer Cadet Officer.*

### *Petty Officers.*

Longmore, Harold T.

Morrill, Arthur G.

## WINTER TERM.

Landrey, Francis X., *Cadet Master.*

### *Navigation.*

Dean, Joseph G., . . . . *Cadet First Officer.*  
 Kant, Henry W., . . . . *Cadet Second Officer.*  
 Steinmetz, Fred C. B., . . . . *Cadet Third Officer.*

### *Engineering.*

Berteaux, Arthur G., . . . . *Cadet Engineer.*  
 Kenyon, Chesley L., . . . . *Cadet First Assistant Engineer.*  
 Oldroyd, James N., . . . . *Cadet Second Assistant Engineer.*

### *Petty Officers.*

(Deck.)

Watt, William G.  
 Collins, Theodore  
 Stevens, Earle S.  
 Colson, Ralph I.

Hannan, John F.  
 Jacques, Laurence R.  
 Coughlin, Daniel J.  
 Freeman, Charles A.

### *(Engineering.)*

Young, John D.

## MEMBERSHIP OF THE SCHOOL.

## GRADUATING CLASS, APRIL, 1919.

\* Received 85 per cent, or over, and entitled to wear gold star on coat collar.

*Seamanship Division.*

* <b>Lord, Harry C.,</b>	Springfield.
* <b>O'Leary, Arthur,</b>	South Boston.
* <b>Gardiner, Nelson E.,</b>	West Fitchburg.
Littlefield, Gordon A.,	Cambridge.
* <b>Hopkins, Harry E.,</b>	North Eastham.
Reed, Sherman W.,	Dorchester.
Fraser, Jack A.,	Medford.
Moulton, William H.,	Bedford.
Purdy, Paul E.,	Everett.
Scully, Charles B.,	Rockland.
Vincent, Rudolphus N.,	Vineyard Haven.
Roberts, Llewellyn,	Somerville.
Donahoe, John W.,	Dorchester.
Torrey, Charles W.,	Rockland.
DeLeskey, Frederick T.,	East Boston.
O'Brion, Robert S.,	Malden.
Wilkinson, Harold B.,	Lynn.
Hall, Roy D.,	Dennis.
Bossom, Charles F.,	Arlington.

*Engineering Division.*

* <b>Carey, Walter E.,</b>	Holyoke.
Hanna, Guy M.,	Waltham.
Bailey, Warren L., Jr.,	Worcester.
Sanford, Loran H.,	Beverly.
Couple, Frank J.,	Montello.
Beatty, James F.,	Lowell.
Cunningham, John D.,	Quincy.

## GRADUATING CLASS, SEPTEMBER, 1919.

*Seamanship Division.*

* <b>Studley, William B., Jr.,</b>	Fairhaven.
* <b>Bemis, Edmond F.,</b>	East Lynn.
Cronin, Walter J.,	Somerville.
Gosselin, Joseph W.,	Nahant.
Longmore, Harold T.,	Stoneham.
Jenness, Walter W.,	Malden.
Morrill, Arthur G.,	Melrose.
Mahoney, John J.,	Revere.

Waters, Ernest B.,	Nahant.
Gilman, Charles E.,	Somerville.
Henderson, George A.,	Brighton.
Harrington, Francis J.,	Revere.
McNulty, Richard R.,	Gloucester.
Stone, Paul,	Pigeon Cove.
Howe, Harry C.,	Stoneham.
Nickerson, Richard F.,	South Duxbury.
Needham, Alfred A.,	Manchester.
Barrus, Adelburt,	Edgartown.

*Engineering Division.*

<b>*Holmes, Carl W.,</b>	North Easton.
Walcott, Roger N.,	Concord.
Morin, Edward H.,	Stoneham.
Macintyre, Ronald G.,	Fall River.
Forsberg, George E.,	Worcester.
Mitchell, Charles B.,	Lawrence.
Cotter, Thomas F., Jr.,	Lawrence.
Smith, Harding,	Nantucket.
Clements, George C.,	Lynn.
Stickel, Charles H.,	East Lynn.
Cusolito, Dominik J.,	Somerville.

## CLASS TO GRADUATE MARCH, 1920.

*Seamanship Division.*

Dean, Joseph G.,	Springfield.
<b>*Landrey, Francis X.,</b>	Roslindale.
Collins, Theodore,	Plymouth.
Steinmetz, Fred C. B.,	Springfield.
Jacques, Laurence R.,	Springfield.
Kant, Henry W.,	Allston.
Bartlett, Clarence A.,	Lowell.
<b>*Colburn, Erwin F.,</b>	Somerville.
Hannan, John F.,	Gloucester.
Full, Fred M., Jr.,	Rockport.
Hartley, Noble M.,	Winthrop.
Tilton, Ralph E.,	Fitchburg.
Whittemore, Joseph K.,	West Roxbury.
Freeman, Charles A., Jr.,	Taunton.
Osborne, Roger W.,	East Lynn.
Taylor, Richard B.,	West Somerville.
Coughlin, Daniel J.,	Lowell.
O'Sullivan, Mortimer P.,	Medford.
Griffin, Oswald J.,	Fall River.
Coughlin, Thomas F.,	Dorchester.

*Engineering Division.*

Berteaux, Arthur G., . . . . .	Boston.
Kenyon, Chesley L., . . . . .	Chester.
Warner, Ralph B., . . . . .	Marlborough.
Burke, Joseph F., . . . . .	Everett.
Oldroyd, James N., . . . . .	Lynn.
Hendy, William R., . . . . .	Stow.
Donahue, Joseph H., . . . . .	Lawrence.
Clegg, Earle F., . . . . .	Worcester.
Gibson, Charles J., . . . . .	Beverly.

## CLASS TO GRADUATE OCTOBER, 1920.

<b>*Watt, William G.,</b> . . . . .	Auburndale.
Bowen, Raymond A., . . . . .	Gloucester.
Atwood, David F., . . . . .	West Falmouth.
Colson, Ralph I., . . . . .	Everett.
Stevens, Earle S., . . . . .	Readville.
Lord, George P., Jr., . . . . .	Salem.
Gordon, Max, . . . . .	South Braintree.
Clarke, Roger W., . . . . .	Auburndale.
Donnelly, Francis E., . . . . .	Roslindale.
Devlin, J. Francis, Jr., . . . . .	Salem.
Brown, Lorenzo C., . . . . .	Everett.
Sawyer, J. Harlan, . . . . .	Weston.
Tyrrell, William S., . . . . .	Cambridge.
Flanagan, Joseph H., . . . . .	Lawrence.
Clark, Charles R., . . . . .	Lynn.
McCreery, Robert D., Jr., . . . . .	Lawrence.
Bartlett, Charles H., . . . . .	Roslindale.
Mariner, Robert D., . . . . .	Cambridge.
Young, John D., . . . . .	Winthrop.
Flanagan, John L., . . . . .	Lawrence.
Paddock, Alexander M. S., . . . . .	Cambridge.

## CLASS TO GRADUATE MARCH, 1921.

Robertson, John A., . . . . .	Boston.
Franklin, Arnold L., . . . . .	Springfield.
Coughlin, Charles H., . . . . .	Lowell.
LeCour, Harold J., . . . . .	Winthrop.
Sullivan, John P., Jr., . . . . .	Springfield.
Bailey, Bertram S., . . . . .	East Boston.
Finney, George L., . . . . .	Brookfield.
Hammond, Leighton S., . . . . .	Marion.
Colgan, M. Read, . . . . .	Brookline.

Lewis, Manuel, Jr., . . . . .	New Bedford.
Harlow, Frederick L., . . . . .	Cotuit.
Coleman, Henry O., Jr., . . . . .	Melrose.
Curley, Frank J., . . . . .	Dedham.
Hutchins, Trafton, . . . . .	Haverhill.
Severne, Homer A., . . . . .	Dorchester.
Whelan, John H., . . . . .	Campello.
Murphy, Frederick L., . . . . .	Roxbury.
Bailey, Edward N., . . . . .	Rockport.
Nelson, Clarence M., . . . . .	Provincetown.
McKinley, James G., . . . . .	Lowell.
McDonald, James A., . . . . .	Lowell.
Hardy, Raymond N., . . . . .	West Somerville.
Pilkington, Albert I., . . . . .	Mansfield.
Tupper, Ernest A., . . . . .	Lowell.
Smith, John B., . . . . .	Hyannisport.
Hohenberger, George J., . . . . .	Holyoke.
Barkley, George, . . . . .	Holyoke.
O'Sullivan, Roger J., . . . . .	Medford.
Crawford, Theodore, . . . . .	Allston.
Rhodes, Robert S. F., . . . . .	Worcester.
Taylor, Robert E., . . . . .	Mattapan.
Donovan, Frederick H., . . . . .	Lawrence.
Riordan, William J., . . . . .	Lowell.

## CLASS TO GRADUATE OCTOBER, 1921.

(Alphabetically arranged.)

Atkinson, Philip W., . . . . .	Fitchburg.
Bedell, Lancelot S., . . . . .	Brookfield.
Campbell, Chas. W., . . . . .	Somerville.
Clancy, Wilbur G., . . . . .	East Methuen.
Cousins, Raymond A., . . . . .	Framingham.
Foster, Charles G., . . . . .	East Brewster.
Godfrey, Alphonsus J., . . . . .	Dorchester.
Graves, Rupert D., . . . . .	Peabody.
Hale, Ernest H., . . . . .	Fall River.
Hanson, Henry C., Jr., . . . . .	Roxbury.
Hennessy, John C., . . . . .	West Medford.
Lavin, George J., . . . . .	Melrose.
MacLellan, Norman D., . . . . .	South Hanson.
Marvin, Theodore W., . . . . .	Roxbury.
McAfee, William C., . . . . .	Woods Hole.
McLaughlin, Edward C., . . . . .	Charlestown.
Messier, Warren M., . . . . .	Watertown.
Mew, Thomas J., . . . . .	Holyoke.

Moriarty, John J., . . . . .	Holyoke.
Murphy, Gerald D., . . . . .	Brockton.
Noonan, William J., Jr., . . . . .	Mansfield.
Perkins, George A., . . . . .	North Carver.
Perry, Alfred T., . . . . .	Nantucket.
Roby, Harold E., . . . . .	Jamaica Plain.
Sise, Edward F., . . . . .	Medford.
Smith, August L., . . . . .	Westwood.
Stowers, Lawrence R., . . . . .	Stoneham.
Strong, J. Lyttleton, . . . . .	Weston.
Sullivan, Lawrence T., . . . . .	East Boston.
Twombly, Raymond H., . . . . .	North Andover.
Vera, George A., . . . . .	New Bedford.
Wells, J. Blaisdell, . . . . .	Somerville.
Williams, Arthur F., . . . . .	Dorchester.



## CADETS ADMITTED, GRADUATED, AND HONORABLY DISCHARGED, FROM 1893 TO 1919, INCLUSIVE.

	ADMITTED.			GRADUATED.			HONORABLY DISCHARGED.			Withdrawn, dismissed, dropped.	Number connected with the School.
	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.	Sea- manship Class.	Engineer Class.	Totals.		
1893, . . . . .	141	-	141	-	-	-	29	-	29	24	138
1894, . . . . .	42	21	63	-	-	-	26	17	43	18	156
1895, . . . . .	33	38	71	19	19	38	6	6	12	6	156
1896, . . . . .	35	39	74	20	17	37	16	15	31	17	174
1897, . . . . .	32	41	73	20	21	41	10	20	20	9	165
1898, . . . . .	42	57	99	15	25	40	12	14	26	23	194
1898, & . . . . .	34	45	79	11	23	34	24	17	41	11	134
1899, . . . . .	28	50	78	14	36	50	9	12	21	14	136
1900, . . . . .	34	37	71	11	18	29	8	12	20	16	172
1901, . . . . .	32	58	90	16	22	38	16	18	34	13	197
1902, . . . . .	34	32	66	17	14	31	10	15	25	17	178
1903, . . . . .	-	-	60	16	29	45	5	12	17	31	165
1904, . . . . .	-	-	65	10	10	20	-	-	9	13	137
1905, . . . . .	-	-	50	16	19	35	-	-	18	19	145
1906, . . . . .	-	-	60	16	15	31	-	-	17	26	133
1907, . . . . .	-	-	45	8	10	18	-	-	9	9	110
1908, . . . . .	-	-	81	14	22	36	-	-	16	16	156
1909, . . . . .	-	-	54	6	16	22	-	-	15	15	151
1910, . . . . .	-	-	69	20	23	43	-	-	14	18	188
1911, . . . . .	-	-	57	17	16	33	-	-	20	8	127
1912, . . . . .	-	-	79	21	19	40	-	-	22	7	174
1913, . . . . .	-	-	65	20	16	36	-	-	18	8	171
1914, . . . . .	-	-	70	26	19	45	-	-	36	11	176
1915, . . . . .	-	-	73	23	15	38	-	-	3	3	175
1916, . . . . .	-	-	69	26	11	37	-	-	16	3	167
1917, . . . . .	-	-	65	31	17	48	-	-	10	4	178
1918, . . . . .	-	-	77	37	18	55	-	-	17	5	193
1919, . . . . .	-	-	-	-	-	-	-	-	-	-	-
Totals, . . . . .	-	-	1,945	444	459	903	-	-	555	371	-

1 Since 1904 the cadets have been unclassified during the first year of their course.

REGISTER OF GRADUATES.  
*Officers in the Merchant Marine.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1900	Joseph E. Gately, . . .	Marlborough, .	Marine superintendent.	United States Shipping Board, Philadelphia, Pa.
1901	John J. Coholan, . . .	South Boston, .	Marine superintendent.	United States Shipping Board, Boston, Mass.
1907	Frederic A. Gainard, . .	Chelsea, . . .	Marine superintendent.	United States Shipping Board, New York, N. Y.
1911	Norris T. Ela, . . . .	Douglas, . . .	Marine superintendent.	W. R. Wiest & Co., Baltimore, Md.
1916	John W. Simmons, . .	Springfield, . .	Assistant Marine superintendent.	International Mercantile Marine Lines.
1894	James E. Reardon, . .	Roxbury, . . .	Captain, . . .	"Moldegaard."
1894	Albert L. Warner, . . .	Wollaston, . . .	Captain, . . .	"Lake Gardner."
1895	Walter J. Healey, . . .	Worcester, . . .	Captain, . . .	"O. T. Waring."
1896	Wm. N. P. Baker, . . .	Brooklyn, . . .	Captain, . . .	"Minniqua."
1896	Geo. R. Lauriat, . . .	Ft. Moultrie, . .	Captain, . . .	"Gen. Brannan."
1897	H. W. G. Atkins, . . .	Reading, . . .	Captain, . . .	- -
1897	Edwin F. Darling, . . .	W. Dennis, . . .	Captain, . . .	"National Bridge."
1897	Mina Dailey, . . . .	Rockport, . . .	Captain, . . .	"Harwood."
1897	Charles W. Clift, . . .	Whitman, . . .	Captain, . . .	"Gen. J. M. Schofield."
1898	Louis E. Congdon, . .	Boston, . . .	Captain, . . .	"Oakland."
1898	Carl E. A. Anderson, .	Brooklyn, . . .	Captain, . . .	"Arizonan."
1899	Walter S. Lynch, . . .	Chelsea, . . .	Captain, . . .	- -
1899	Richard T. Blackford, .	Marblehead, . .	Captain, . . .	- -
1899	Edward G. Smith, . .	Burlington, . .	Captain, . . .	"Freeport."
1900	William B. Knight, . .	Bellingham, . .	Captain, . . .	"Catherine D."
1901	Theodore H. Bicknell, .	Melrose, . . .	Captain, . . .	"Hewitt."
1901	Robert W. Tucker, . .	Kendal Green, .	Captain, . . .	"Oconee."
1902	Osborne E. McKay, . .	Sagamore, . . .	Captain, . . .	"Casey."
1902	A. Russell Cushing, . .	Allston, . . .	Captain, . . .	"Claverack."
1902	Edwin J. Madden, . .	Clifton, N. J., .	Captain, . . .	"Invincible."
1903	Nicholas J. Kane, . . .	Brooklyn, N. Y.,	Captain, . . .	- -
1903	Mark Woodbury, . . .	San Francisco, .	Captain, . . .	"Lake Glenco."
1903	Robert B. Powers, . .	Brockton, . . .	Captain, . . .	- -
1904	Edward C. Roberts, . .	North Beverly, .	Captain, . . .	"Gen. Goethals."
1905	Harold H. Gridley, . .	Dorchester, . .	Captain, . . .	"Caddo."
1905	James A. Crocker, . .	Nahant, . . .	Captain, . . .	"Yesoking."
1905	Frederick S. Walker, . .	Everett, . . .	Captain, . . .	"Brandon."
1906	Geo. C. Bosson, . . .	Reading, . . .	Captain, . . .	- -
1907	Elmer B. Small, . . .	No. Truro, . . .	Captain, . . .	- -

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1907	William M. Gifford, . . .	Woods Hole, . . .	Captain, . . .	"Belleflower."
1908	Eugene P. Shevlin, . . .	E. Boston, . . .	Captain, . . .	- -
1908	Edward S. Ells, Jr., . . .	Haverhill, . . .	Captain, . . .	- -
1909	Harold C. Cooper, . . .	Worcester, . . .	Captain, . . .	"Polarine."
1909	Carroll E. Higgins, . . .	Somerville, . . .	Captain, . . .	- -
1909	Robert S. Sparrow, . . .	Eastham, . . .	Captain, . . .	"Sutherland."
1910	Chester E. Morris, . . .	Brooklyn, N.Y., . . .	Captain, . . .	"Aledo."
1911	Chas. F. Fornason, . . .	Marblehead, . . .	Captain, . . .	"Sinsinawa."
1911	Albert L. Ware, . . .	Cambridge, . . .	Captain, . . .	"Western Scout."
1911	Harold S. Dexter, . . .	Mattapoisett, . . .	Captain, . . .	- -
1911	Henry O. K. Hanson, . . .	Neponset, . . .	Captain, . . .	"Matoa."
1911	Raymond C. Vose, . . .	Norfolk, Va., . . .	Captain, . . .	"Dauperata."
1911	Eugene W. Miller, . . .	E. Saugus, . . .	Captain, . . .	- -
1912	Harold Ertel, . . .	Longmeadow, . . .	Captain, . . .	"Lake Cayuga."
1912	Russell A. Eastman, . . .	Mattapoisett, . . .	Captain, . . .	- -
1912	Alex. G. Perkins, Jr., . . .	Newburyport, . . .	Captain, . . .	"Coulee."
1912	Robert M. Gray, . . .	Melrose, . . .	Captain, . . .	"Lake Shore."
1913	Arthur G. Burt, . . .	Whitman, . . .	Captain, . . .	"Henry R. Mal- lory."
1913	Borden A. Tuell, . . .	New Bedford, . . .	Captain, . . .	"Minnewawa."
1913	Wilfred H. Senior, . . .	Dorchester, . . .	Captain, . . .	"Bloomington."
1914	Nelson T. Nutter, . . .	Newburyport, . . .	Captain, . . .	"Chamblee."
1915	Chas. H. Hurley, Jr., . . .	Gardner, . . .	Captain, . . .	"Lake Winooski."
1895	Geo. L. P. Covell, . . .	Roxbury, . . .	First officer, . . .	United States Ship- ping Board.
1897	Herbert P. Smith, . . .	Nantucket, . . .	First officer, . . .	- -
1898	Harlowe Johnson, . . .	Mattapoisett, . . .	First officer, . . .	- -
1900	Clayton G. Parsons, . . .	Salem, . . .	First officer, . . .	"Roman."
1900	Edward Smith, . . .	Wellesley, . . .	First officer, . . .	"Lake Copley."
1900	Alfred M. Cummings, . . .	Worcester, . . .	First officer, . . .	"Virginian."
1900	Winthrop R. Cutts, . . .	Stoneham, . . .	First officer, . . .	United States Ship- ping Board.
1903	Benjamin O'Connell, . . .	Peabody, . . .	First officer, . . .	- -
1904	Andrew J. Iverson, . . .	Bristol, R. I., . . .	First officer, . . .	- -
1906	Lewis B. Butler, . . .	Worcester, . . .	First officer, . . .	"Lake Fear."
1907	Philip B. Marcy, . . .	Brookline, . . .	First officer, . . .	"Ameland."
1908	Chester B. Mellen, . . .	Bridgeport, Conn.	First officer, . . .	"Mangore."
1910	Charles H. Tumey, . . .	Southbridge, . . .	First officer, . . .	- -
1911	Charles C. Plummer, . . .	Cambridge, . . .	First officer, . . .	"Western Scout."
1911	Wesley F. Besse, . . .	W. Somerville, . . .	First officer, . . .	"Edw. L. Doheny."

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1912	Herbert A. Burns, . . .	New Bedford, .	First officer, . .	- -
1912	Kenneth E. Cahoon, . .	W. Tisbury, .	First officer, . .	"Aurora."
1912	Joseph M. Daniel, . . .	Osterville, . .	First officer, . .	- -
1912	Ellenwood Folger, . . .	Siasconset, . .	First officer, . .	- -
1912	Ralph E. Merithew, . .	Groveland, . .	First officer, . .	"Alapaha."
1913	Philip J. Fanning, . .	Baltimore, Md.,	First officer, . .	- -
1913	Everett O. Swinson, . .	E. Gloucester, .	First officer, . .	"Gen. Goethals."
1913	James A. MacCabe, . .	Osterville, . .	First officer, . .	- -
1913	John A. Maddock, . . .	Newburyport, .	First officer, . .	- -
1913	Ralph W. Dearborn, . .	Mansfield, . .	First officer, . .	- -
1913	Philip H. Waldron, . .	E. Milton, . .	First officer, . .	"Coahoma County."
1913	Frederick L. Howland, .	So. Dartmouth,	First officer, . .	- -
1913	Waldon A. McIntire, . .	E. Gloucester, .	First officer, . .	"Martha Washington."
1913	Frank H. Nelson, . . .	Fall River, . .	First officer, . .	"Florence Luckenbach."
1913	Gregory B. Nichols, . .	Danvers, . .	First officer, . .	"Limon."
1914	Samuel J. Lee, . . . .	Roxbury, . .	First officer, . .	- -
1914	John L. Kirchner, . . .	Hinsdale, . .	First officer, . .	- -
1914	Samuel A. Gates, . . .	Malden, . . .	First officer, . .	- -
1914	F. Palmer Harrington, .	Malden, . . .	First officer, . .	"Anoka."
1915	Geo. T. Horan, . . . .	Dorchester, . .	First officer, . .	American-Hawaiian Steamship Company.
1915	Chas. F. Griffith, . . .	No. Cambridge,	First officer, . .	"West Loquassuck."
1915	Leland M. Marshall, . .	Allston, . . .	First officer, . .	"Eastern Chief."
1915	Arthur A. Hovgaard, . .	Brookline, . .	First officer, . .	"Oleon."
1915	Chas. N. Bamforth, . .	So. Lincoln, .	First officer, . .	"West Hampton."
1915	Earle D. Hammond, . .	E. Mattapoisett,	First officer, . .	"Yosemite."
1915	Herman S. Mayo, . . .	Provincetown, .	First officer, . .	"Fairmont."
1916	Peter J. Jakmauh, . .	So. Boston, . .	First officer, . .	- -
1916	J. Prescott Mahoney, . .	W. Wareham, .	First officer, . .	"Pocahontas."
1916	Paul H. Browne, . . .	Roslindale, . .	First officer, . .	"Frederick."
1916	Arthur J. Kenney, . .	Brookline, . .	First officer, . .	"West Caruth."
1916	William E. Lord, . . .	Swampscott, .	First officer, . .	"Lake Ellerslee."
1916	Clayton W. Collins, . .	Waquoit, . .	First officer, . .	- -
1916	Thomas B. Lufkin, . .	Gloucester, . .	First officer, . .	"Katahdin."
1916	Randall F. Elder, . . .	Brighton, . .	First officer, . .	"Fort Sill."
1916	Edwin T. Fletcher, . .	Springfield, . .	First officer, . .	- -
1917	Alan R. Barton, . . .	Winthrop, . .	First officer, . .	"Lake Winthrop."
1917	Alton E. Borden, . . .	Fall River, . .	First officer, . .	- -

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1917	David M. McLaren, . . .	Dedham, . . .	First officer, . . .	"Eten."
1917	A. Henry Rowe, . . .	Roslindale, . . .	First officer, . . .	"Kisnop."
1917	Herbert W. Susmann, . .	Dorchester, . . .	First officer, . . .	"Lake Bledsoe."
1917	Robert H. Sheridan, . .	Stoneham, . . .	First officer, . . .	"J. M. Guffey."
1917	Arthur S. Phelan, . . .	Lynn, . . .	First officer, . . .	"Askawake."
1918	Hartley Hoffses, . . .	Quincy, . . .	First officer, . . .	- -
1894	Alfred J. O'Leary, . . .	Worcester, . . .	Second officer, . .	"Adacia."
1895	Harold W. Davis, . . .	Somerville, . . .	Second officer, . .	"Western Scout."
1898	Richard Rowles, . . .	Jamaica Plain,	Second officer, . .	- -
1902	George Castle, . . .	Lynn, . . .	Second officer, . .	"Lake Fanning."
1904	Leslie F. Holmes, . . .	E. Whitman, . .	Second officer, . .	- -
1904	Charles H. Stoddard, . .	Brookline, . . .	Second officer, . .	- -
1906	John Ruyter, . . .	Rochester, N. Y.,	Second officer, . .	"Lake Ellio."
1907	Frazier L. Sears, . . .	New York, N. Y.,	Second officer, . .	Standard Oil Company.
1907	Herbert Garity, . . .	Boston, . . .	Second officer, . .	"Dorothy."
1910	Franklin K. Tyler, . . .	Beachmont, . . .	Second officer, . .	"Saramacca."
1911	Angelo A. Aicardi, . . .	So. Boston, . . .	Second officer, . .	- -
1911	Geo. L. E. Johnson, . . .	Worcester, . . .	Second officer, . .	- -
1912	Norman E. Merrill, . . .	Walpole, . . .	Second officer, . .	"Lake Barton."
1912	Wm. H. O'Donoghue, . .	Tampa, Fla., . .	Second officer, . .	"New York."
1912	Albert H. Acorn, Jr., . .	Malden, . . .	Second officer, . .	"Lake Flynus."
1913	Alden L. Hodges, . . .	Boston, . . .	Second officer, . .	"Lake Linden."
1914	Geoffrey C. O'Donoghue,	Tampa, Fla., . .	Second officer, . .	- -
1914	Joseph L. Turner, . . .	Amherst, . . .	Second officer, . .	- -
1914	William H. Fogarty, . . .	Dorchester, . . .	Second officer, . .	- -
1914	Laurence L. Horton, . . .	W. Haven, Conn.,	Second officer, . .	"Prince Frederick Henry."
1914	James A. Stowell, . . .	Walpole, . . .	Second officer, . .	"Sanctiago."
1914	Edward F. Murphy, Jr., .	Fall River, . . .	Second officer, . .	- -
1914	David H. Swinson, . . .	E. Gloucester, .	Second officer, . .	- -
1915	Russell C. Damon, . . .	Hingham, . . .	Second officer, . .	- -
1915	William C. Davenport, . .	New Bedford, . .	Second officer, . .	- -
1915	Curtis C. Fales, . . .	Westborough, . .	Second officer, . .	- -
1915	Chas. P. Jacobson, . . .	Everett, . . .	Second officer, . .	"Oskawa."
1915	Ralph S. Moore, . . .	New York, N. Y.,	Second officer, . .	- -
1915	Harold F. Craven, . . .	Lawrence, . . .	Second officer, . .	"Currier."
1915	Albert V. Jones, . . .	Fall River, . . .	Second officer, . .	"Cricket."
1915	Sidney F. Nichols, . . .	Worcester, . . .	Second officer, . .	- -

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1916	Charles A. Martell, . .	Somerville, . .	Second officer, .	"Shoshone."
1916	John A. Rylander, . .	Springfield, .	Second officer, .	- -
1916	Richard H. Dunphe, . .	Brockton, . .	Second officer, .	"St. Louis."
1916	Harold R. Congdon, . .	Boston, . . .	Second officer, .	"Lake Conway."
1916	Frank M. Perrin, . . .	Worcester, . .	Second officer, .	- -
1916	John T. Crowell, Jr., . .	Gloucester, . .	Second officer, .	- -
1916	Harold S. Ireland, . .	Somerville, . .	Second officer, .	"Sutherland."
1916	Clifford E. Stanley, . .	Salem, . . .	Second officer, .	United States Ship- ping Board.
1916	Fred E. Wilcox, . . .	Indian Orchard,	Second officer, .	- -
1917	Percy A. Crosbie, . . .	Everett, . . .	Second officer, .	"West Point."
1917	Earl S. Francis, . . .	Athol, . . .	Second officer, .	- -
1917	Luther C. Kingsbury, .	Wellesley Hills,	Second officer, .	"Tampico."
1917	Frank M. Moore, . . .	Forest Hills, .	Second officer, .	- -
1917	William M. Preston, . .	Beverly, . . .	Second officer, .	- -
1917	Ivan Freeman, . . . .	E. Orleans, . .	Second officer, .	"Philadelphia."
1917	Franklin B. Atwood, . .	Nantucket, . .	Second officer, .	"Arizonan."
1917	Charles F. Huffman, . .	W. Somerville, .	Second officer, .	"Newton."
1917	Harry Levine, . . . .	Cambridge, . .	Second officer, .	- -
1917	Sydney L. MacLaughlin, .	Wollaston, . .	Second officer, .	"Bramell Point."
1917	Stanley F. Roberts, . .	Springfield, . .	Second officer, .	- -
1917	Russell W. Thresher, . .	Southbridge, . .	Second officer, .	- -
1917	Bradford S. Wilson, . .	Brookline, . .	Second officer, .	- -
1917	Ernest V. Wyatt, . . .	Boston, . . .	Second officer, .	"Lake Jessop."
1918	Robert P. Anderson, . .	Melrose, . . .	Second officer, .	"Oleon."
1918	William H. Fitzgerald, .	Revere, . . .	Second officer, .	- -
1918	Almer T. Hovland, . .	Newton Lower Falls.	Second officer, .	"Middlebury."
1918	Wilbur W. Woods, . . .	Provincetown, .	Second officer, .	"Mexico."
1918	Raymond E. Saunders, . .	W. Somerville, .	Second officer, .	- -
1918	James H. Lowry, . . .	Canton, . . .	Second officer, .	"Lake Ellesmere."
1918	William S. Reagh, . . .	Malden, . . .	Second officer, .	- -
1918	Alex. G. Anderson, . .	Dorchester, . .	Second officer, .	"Lake Annette."
1918	Gerald K. Sanborn, . .	Lawrence, . .	Second officer, .	- -
1918	Alden L. Strout, . . .	Peaks Is., Me.,	Second officer, .	"North Star."
1918	Leonard C. Walen, . .	Gloucester, . .	Second officer, .	"Oregonian."
1919	Llewellyn Roberts, . .	Arlington, . .	Second officer, .	"Yaguiana."
1919	Nelson E. Gardiner, . .	Fitchburg, . .	Second officer, .	- -
1919	Roy D. Hall, . . . .	Dennis, . . .	Second officer, .	"Contocook."



*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1919	Harry C. Lord, . . .	Springfield, .	Second officer, .	"Lake Frugality."
1919	Charles W. Torrey, . .	Rockland, . .	Second officer, .	American-Hawaiian Steamship Com- pany.
1905	Laurence G. Kelley, . .	Taunton, . .	Third officer, . .	- -
1906	Laurence K. Bachelder, .	Harpswell, Me.,	Third officer, . .	- -
1913	John W. Crocker, . . .	Nahant, . . .	Third officer, . .	"El Occidente."
1914	Gerard R. Crosby, . .	Orleans, . . .	Third officer, . .	- -
1914	Lester B. Poole, . . .	Marlboro, . .	Third officer, . .	- -
1915	Laurence E. Burns, . .	Winthrop, . .	Third officer, . .	- -
1915	Ronald B. Ford, . . .	Lawrence, . .	Third officer, . .	"Orion."
1915	Russell L. Saunders, . .	Allston, . . .	Third officer, . .	"Everett."
1916	Albert Bianchi, . . .	Worcester, . .	Third officer, . .	- -
1916	Howard U. Chase, . .	Nantucket, . .	Third officer, . .	- -
1916	Byron H. Paine, . . .	New Bedford, .	Third officer, . .	- -
1917	William W. Storey, . .	Stoneham, . .	Third officer, . .	"San Mateo."
1917	Richard H. Hopkins, .	W. Somerville, .	Third officer, . .	"Santore."
1918	Edgar G. Glines, . . .	Beverly, . . .	Third officer, . .	- -
1918	Raphael W. Hill, . . .	Provincetown, .	Third officer, . .	"Monterey."
1918	G. Minard Cunningham, .	Lawrence, . .	Third officer, . .	"Sutherland."
1918	Ira D. Dean, . . . .	So. Natick, . .	Third officer, . .	"Lake Ogden."
1918	Jacob I. Popkin, . . .	Malden, . . .	Third officer, . .	"San Jose."
1918	Clifford Roswall, . . .	Dorchester, .	Third officer, . .	"Tourist."
1918	Max Distelman, . . .	Newburyport, .	Third officer, . .	"Brabant."
1918	James J. Crowley, . . .	No. Abington, .	Third officer, . .	"Silver Shell."
1918	James E. Fraser, . . .	Boston, . . .	Third officer, . .	"Lake Yemassee."
1918	Arthur B. Gibbs, . . .	Nantucket, . .	Third officer, . .	"Harvey Brown."
1919	Frederick T. DeLeskey, .	E. Boston, . .	Third officer, . .	"Corsica."
1919	Charles F. Bossom, . .	Boston, . . .	Third officer, . .	- -
1919	John W. Donahoe, . .	Dorchester, .	Third officer, . .	"Lake Larrabee."
1919	Harry E. Hopkins, . .	No. Eastham, .	Third officer, . .	"Dorothy."
1919	Gordon A. Littlefield, .	Cambridge, .	Third officer, . .	"West Eagle."
1919	William H. Moulton, . .	Bedford, . . .	Third officer, . .	"Lewis Lucken- bach."
1919	Arthur O'Leary, . . .	So. Boston, . .	Third officer, . .	"Lake Flynus."
1919	Paul E. Purdy, . . .	Everett, . . .	Third officer, . .	"Lake Gletna."
1919	Sherman W. Reed, . .	Dorchester, .	Third officer, . .	"Neeloh."
1919	Rudolphus N. Vincent, .	V i n e y a r d Haven.	Third officer, . .	"West Harcovar."
1919	Harold B. Wilkinson, .	Lynn, . . .	Third officer, . .	"Lake Galando."
1919	Walter J. Cronin, . . .	Somerville, . .	Third officer, . .	"Malden."



*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1919	Edmond F. Bemis, . .	E. Lynn, . .	Third officer, . .	"West Zula."
1919	Charles E. Gilman, . .	Somerville, . .	Third officer, . .	"Everett."
1919	Joseph W. Gosselin, . .	Nahant, . . .	Third officer, . .	"Crofton Hall."
1919	Francis J. Harrington, .	Revere, . . .	Third officer, . .	"Faith."
1919	Walter W. Jenness, . .	Malden, . . .	Third officer, . .	"Lake Delancey."
1919	Harold T. Longmore, .	Stoneham, . .	Third officer, . .	"Bancraft."
1919	John J. Mahoney, . . .	Revere, . . .	Third officer, . .	"Lake Titman."
1919	Richard R. McNulty, .	Gloucester, . .	Third officer, . .	"Lightburne."
1919	Arthur G. Morrill, . .	Melrose, . . .	Third officer, . .	"Lake Delancey."
1919	Alfred A. Needham, . .	Manchester, .	Third officer, . .	"Ardena."
1919	Richard F. Nickerson, .	So. Duxbury, .	Third officer, . .	"Lake Ellecote."
1919	G. F. Paul Stone, . . .	Pigeon Cove, .	Third officer, . .	"Alabama."
1919	Wm. B. Studley, Jr., .	Fairhaven, . .	Third officer, . .	"Apelles."
1919	Ernest B. Waters, . . .	Nahant, . . .	Third officer, . .	"Beloit."
1900	Hollis M. Cornwall, . .	Melrose, . . .	Superintendent, engineer.	Merchants and Miners Transportation Company.
1907	Paul R. Smith, . . .	Brooklyn, N. Y.,	Superintendent, engineer.	Kerr Steamship Company.
1895	Michael D. Sullivan, . .	San Francisco, Cal.	Chief engineer, .	"Rosencranz."
1898	William E. Ballsdon, . .	Neponset, . .	Chief engineer, .	"Herman Winter."
1898	Wilbur S. Lamont, . .	Leominster, .	Chief engineer, .	Panama Canal.
1898	Everett S. Ransom, . .	E. Mattapoisett,	Chief engineer, .	- -
1898	Charles E. Rowe, . . .	Lynn, . . .	Chief engineer, .	- -
1898	John C. Ganser, . . .	Jersey City, N. J.	Chief engineer, .	- -
1900	Charles E. Lowe, . . .	Roxbury, . .	Chief engineer, .	"Cicaque."
1900	Elmer P. Butterworth, .	Pt. Arthur, Tex.,	Chief engineer, .	"Gulfcoast."
1900	William Glover, . . .	Wilmington, .	Chief engineer, .	"Mielerio."
1900	Norris R. Sibley, . . .	Worcester, . .	Chief engineer, .	"Col. Wikoff."
1901	Eugene I. K. Murphy, .	New York, N. Y.	Chief engineer, .	- -
1902	Daniel F. Butler, . . .	Waltham, . .	Chief engineer, .	"Gloria."
1903	James S. McGarry, . .	New York, N. Y.	Chief engineer, .	"El Alba."
1903	Edmund E. Powers, . .	Cambridge, .	Chief engineer, .	- -
1904	Charles W. Bumpus, . .	Wareham, . .	Chief engineer, .	"City of Gloucester."
1905	Walter C. Lockhart, . .	Washington, D. C.	Chief engineer, .	- -
1905	Fred G. Carlton, . . .	Maynard, . .	Chief engineer, .	- -
1906	Augustus C. Caldwell, .	Dorchester, .	Chief engineer, .	- -
1906	Arthur G. Burbank, . .	Carver, . . .	Chief engineer, .	- -
1907	George H. Stickney, . .	Watertown, Conn.	Chief engineer, .	- -
1907	Archie E. Bragg, . . .	New Bedford, .	Chief engineer, .	- -

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1908	Thomas B. Pellett, . .	Worcester, . .	Chief engineer, .	- -
1909	Everett B. Ward, . . .	New York, N. Y.,	Chief engineer, .	- -
1909	William A. Sullivan, . .	E. Boston, . .	Chief engineer, .	Mine sweeper.
1909	Samuel J. Miller, . . .	Fall River, . .	Chief engineer, .	- -
1910	George W. Sibley, . . .	Worcester, . .	Chief engineer, .	"Moldegaard."
1910	R. Wilbur Anderson, . .	Mattapan, . .	Chief engineer, .	"Passaic Bridge."
1911	Robert F. Phinney, . .	Mattapan, . .	Chief engineer, .	"Matinicock."
1911	Harvey M. Thorndike, .	Cliftondale, .	Chief engineer, .	"El Capitan."
1912	John M. Marks, . . .	Gloucester, . .	Chief engineer, .	"Burnwell."
1914	Arthur C. Goodwin, . .	Somerville, . .	Chief engineer, .	"Chapelle."
1917	John D. Noonan, . . .	Mansfield, . .	Chief engineer, .	Turbine School, United States Shipping Board. "J. N. Guffy."
1897	Augustus T. Holmes, . .	Ipswich, . . .	First assistant en- gineer.	- -
1898	Frank P. Killion, . . .	Honolulu, T. H.,	First assistant en- gineer.	"Mauna Loa."
1900	Earle P. Marshall, . . .	No. Easton, . .	First assistant en- gineer.	"Lake Buckeye."
1902	Augustus W. Hart, . .	No. Truro, . .	First assistant en- gineer.	- -
1904	Cecil L. McIntyre, . .	Jersey City, N. J.	First assistant en- gineer.	United States Ship- ping Board.
1904	Benj. L. Welch, . . .	Lynn, . . .	First assistant en- gineer.	"Eastern Chief."
1904	Edward J. Chadbourne, .	Reading, . .	First assistant en- gineer.	- -
1905	Thomas W. Chisholm, .	Washington, D. C.	First assistant en- gineer.	- -
1907	Joseph R. Wier, . . .	Saundersville, .	First assistant en- gineer.	- -
1909	Richard K. Henry, . .	Everett, . . .	First assistant en- gineer.	- -
1909	William E. Caddigan, .	Dorchester, .	First assistant en- gineer.	- -
1909	Fritz T. Kebler, . . .	Rochdale, . .	First assistant en- gineer.	"Henry F. Dim- ock."
1910	Leslie S. Badger, . . .	Norfolk, Va., .	First assistant en- gineer.	"Galveston."
1910	Harold C. Grover, . .	Stoneham, . .	First assistant en- gineer.	- -
1913	Paul S. Rice, . . .	Cambridge, . .	First assistant en- gineer.	"Arlington."
1913	Russell A. McLay, . .	Providence, R. I.	First assistant en- gineer.	"Currier."
1914	Leslie T. Severance, . .	Cambridge, . .	First assistant en- gineer.	"Malden."
1914	Fred. H. Brewster, . .	Somerville, . .	First assistant en- gineer.	United States Ship- ping Board.
1914	James A. Sweeney, . .	E. Boston, . .	First assistant en- gineer.	- -
1914	Charles P. Tucker, . .	Boston, . . .	First assistant en- gineer.	"Osage."
1915	Roy C. Hartwell, . . .	New York, N. Y.,	First assistant en- gineer.	"Arizonan."
1915	Clarence E. Stevens, Jr.,	W. Barnstable, .	First assistant en- gineer.	- -
1915	John F. Houston, Jr., .	Long Island, N. Y.	First assistant en- gineer.	"Gen. Goethals."
1915	Philip J. Durney, . . .	Gloucester, . .	First assistant en- gineer.	"Lake Farge."
1916	Percy C. Stevens, . . .	W. Barnstable, .	First assistant en- gineer.	- -

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1916	Paul Gorman, . . . .	Marlboro, . . .	First assistant engineer.	"Nyanza."
1916	Alex. J. Phillips, . . . .	Easton, . . . .	First assistant engineer.	"Boundbrook."
1917	Arthur Massey, . . . .	No. Andover, . .	First assistant engineer.	"Saxonia."
1919	Loran H. Sanford, . . . .	Beverly, . . . .	First assistant engineer.	"Cowiche."
1896	Arthur W. Higham, . . . .	Lawrence, . . .	Second assistant engineer.	- -
1897	Perley W. Kimpton, . . . .	E. Somerville, .	Second assistant engineer.	"Shawmut."
1903	Harold A. Thompson, . . . .	So. Framingham, .	Second assistant engineer.	- -
1904	William A. Danforth, . . . .	Dorchester, . . .	Second assistant engineer.	- -
1906	Victor M. Foster, . . . .	E. Boston, . . .	Second assistant engineer.	"Newton."
1908	Arthur E. Whiton, . . . .	Greenwood, . . .	Second assistant engineer.	"Norwood."
1909	Frederick H. H. Sylvia, . . . .	Nantucket, . . .	Second assistant engineer.	- -
1909	Leo A. Keating, . . . .	Natick, . . . .	Second assistant engineer.	- -
1910	William Bowen, . . . .	Boston, . . . .	Second assistant engineer.	"Bunker Hill."
1911	David J. Fulton, . . . .	Wollaston, . . .	Second assistant engineer.	"Pluto."
1911	George L. Lockhart, . . . .	Wakefield, . . .	Second assistant engineer.	"Orion."
1911	Alfred Marques, . . . .	Charlestown, . .	Second assistant engineer.	- -
1911	Samuel D. White, . . . .	Hyannisport, . .	Second assistant engineer.	"Edw. Pierce."
1912	Richard J. Cavanaugh, . . . .	New Bedford, . .	Second assistant engineer.	- -
1912	George R. Davison, . . . .	Springfield, . . .	Second assistant engineer.	"Ancon."
1912	Louis H. Racicot, . . . .	Lowell, . . . .	Second assistant engineer.	"Ruth."
1913	Charles J. Balboni, . . . .	New Bedford, . .	Second assistant engineer.	"Bessemer."
1913	Edward J. Fogarty, . . . .	E. Boston, . . .	Second assistant engineer.	"Ockenfels."
1914	Benj. H. Allen, Jr., . . . .	Lawrence, . . .	Second assistant engineer.	"Leviathan."
1914	Herbert T. Douglas, . . . .	W. Medford, . . .	Second assistant engineer.	"Lake Ontario."
1914	C. Harold Peterson, . . . .	Norwood, . . . .	Second assistant engineer.	- -
1914	Joseph L. Concannon, . . . .	So. Boston, . . .	Second assistant engineer.	"Brindella."
1915	Arvid H. Winquist, . . . .	Mattapan, . . . .	Second assistant engineer.	"Lake Louise."
1915	Sherman J. Barrett, . . . .	Lawrence, . . .	Second assistant engineer.	- -
1915	Arthur F. Higgins, . . . .	Lawrence, . . .	Second assistant engineer.	"Corrales."
1916	William W. Thomas, . . . .	Concord, . . . .	Second assistant engineer.	- -
1916	Henry A. Guba, . . . .	New Bedford, . .	Second assistant engineer.	- -
1916	John E. Pilkington, . . . .	Mansfield, . . .	Second assistant engineer.	"Oscalossa."
1916	Harold W. Sanford, . . . .	Springfield, . . .	Second assistant engineer.	- -
1917	Ernest C. Jensen, . . . .	Provincetown, . .	Second assistant engineer.	"Carolina."
1917	Herbert A. James, . . . .	Wellesley Farms, .	Second assistant engineer.	"Lake Lida."
1917	John T. Foye, . . . .	Bridgewater, . .	Second assistant engineer.	- -

*Officers in the Merchant Marine — Continued.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1917	Kenneth H. Plummer, .	Roxbury, . .	Second assistant engineer.	"Josiah Macy."
1917	Ernest E. Raby, . . .	No. Easton, .	Second assistant engineer.	"Corsica."
1918	Jos. Freeman, . . . .	Revere, . . .	Second assistant engineer.	"Artegan."
1918	Ralph A. Evers, . . .	Somerville, . .	Second assistant engineer.	- -
1918	Stuart R. Colson, . . .	Whitman, . . .	Second assistant engineer.	"O. T. Waring."
1918	John R. Donlin, . . . .	Medford, . . .	Second assistant engineer.	"Lake Flynus."
1918	Francis J. Easton, . . .	Randolph, . .	Second assistant engineer.	"Brandrinno."
1918	Louis H. Johnson, . . .	Andover, . . .	Second assistant engineer.	"Lake Sapor."
1919	Warren L. Bailey, Jr., .	Worcester, . .	Second assistant engineer.	"Lake Charlottes-ville."
1919	Frank J. Couble, . . .	Brockton, . . .	Third assistant engineer.	"Pocahontas."
1898	Charles E. Perry, . . .	Hyde Park, . .	Third assistant engineer.	"Western Plains."
1904	Alfred C. Blunt, . . .	Fitchburg, . .	Third assistant engineer.	"Lake Alvada."
1904	Thos. F. Gosnay, . . .	Wakefield, . .	Third assistant engineer.	- -
1907	Chas. S. McDonald, . .	Malden, . . .	Third assistant engineer.	- -
1911	Patrick S. Coakley, . .	Malden, . . .	Third assistant engineer.	- -
1911	Walter P. Lynn, . . . .	Beverly, . . .	Third assistant engineer.	"Lake Copley."
1911	Joseph C. Chisholm, . .	No. Billerica, .	Third assistant engineer.	- -
1911	Levi E. MacLeod, . . .	Gloucester, . .	Third assistant engineer.	- -
1912	Walter L. Brewster, . .	Somerville, . .	Third assistant engineer.	"F. J. Lisman."
1913	Nils J. Peterson, . . .	Brockton, . . .	Third assistant engineer.	- -
1914	Wesley H. Burton, . . .	Plainville, . .	Third assistant engineer.	"Lithopolis."
1915	Stanislaus P. J. Ciolkosz,	Taunton, . . .	Third assistant engineer.	United States Shipping Board.
1915	Wilfred C. Herron, . . .	Lawrence, . . .	Third assistant engineer.	- -
1916	Joseph P. Condrey, . . .	Lowell, . . . .	Third assistant engineer.	- -
1916	Carl E. Berglund, . . .	Brockton, . . .	Third assistant engineer.	- -
1916	Carleton G. Reed, . . .	Lexington, . .	Third assistant engineer.	- -
1916	Richard A. Standley, . .	Beverly, . . .	Third assistant engineer.	"Lake Benton."
1917	Philip H. Little, . . . .	Holbrook, . . .	Third assistant engineer.	"Lake Forney."
1918	John R. Carden, . . . .	Haverhill, . .	Third assistant engineer.	"Lake Fernwood."
1918	Bernard F. Hurld, . . .	Stoneham, . . .	Third assistant engineer.	"Van Dyke."
1918	Karl W. Newman, . . .	Brockton, . . .	Third assistant engineer.	"De Soto."
1918	Elmer J. Kelley, . . . .	Agawam, . . .	Third assistant engineer.	"Lake Licking."
1919	Walter E. Carey, . . . .	Holyoke, . . .	Third assistant engineer.	"America."
1919	John D. Cunningham, . .	Quincy, . . . .	Third assistant engineer.	"Lake Sapor."
1919	Guy M. Hanna, . . . .	Waltham, . . .	Third assistant engineer.	"Northern Wave."
1919	George C. Clements, . .	Lynn, . . . .	Third assistant engineer.	"Vanguard."

*Officers in the Merchant Marine — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1919	Thomas F. Cotter, . .	Lawrence, . .	Third assistant engineer.	"Ardena."
1919	Dominik J. Cusolito, . .	Somerville, . .	Third assistant engineer.	"Malden."
1919	George E. Forsberg, . .	Worcester, . .	Third assistant engineer.	"North Pole."
1919	Carl W. Holmes, . . .	No. Easton, . .	Third assistant engineer.	"City of Rome."
1919	Charles B. Mitchell, . .	Lawrence, . .	Third assistant engineer.	"Lake Folcroft."
1919	Ronald G. Macintyre, . .	Fall River, . .	Third assistant engineer.	"Contoocook."
1919	Edward H. Morin, . .	Stoneham, . .	Third assistant engineer.	"Brookland."
1919	Harding Smith, . . .	Nantucket, . .	Third assistant engineer.	"Allison."
1919	Charles H. Stickel, . .	E. Lynn, . .	Third assistant engineer.	"Lake Yahara."
1919	Roger N. Walcott, . . .	Concord, . .	Third assistant engineer.	"Lake Fagundas."
1895	Horace W. Folger, . . .	Wilmington, . .	Pilot, . . . .	Boston Pilot Boat Service.
1900	I. Clarence Bailey, . .	Kingston, . .	Pilot, . . . .	Boston Pilot Boat Service.
1902	Arthur T. Luther, . . .	Swansea, . .	Pilot, . . . .	Panama Canal.
1915	David P. Delano, . . .	Orleans, . . .	Harbor master, .	Clyde & Mallory Lines.

*Ship Construction.*

1898	Joseph E. Sheedy, . .	Seattle, Wash., .	Assistant to president.	Downey Shipbuilding Corporation, Staten Island, N. Y.
1899	George F. Waite, . . .	Winthrop, . .	Superintendent, .	American International Shipbuilding Company.
1901	David W. Warren, . . .	Everett, . . .	Master mechanic,	Curtis Bay Copper Iron Works.
1903	Edward J. Hogan, . .	Charlestown, .	Assistant superintendent.	Victory Plant, Squantum, Mass.
1909	Stanton Habersham, . .	Bridgeport, Conn.	Hull draftsman, .	Lake Torpedo Boat Company.
1911	Henry W. Ober, . . .	Everett, . . .	Electrician, . .	Fore River Shipbuilding Company.
1912	Joseph B. Sylvaro, . .	Dorchester, .	Electrician, . .	Fore River Shipbuilding Company.

*With United States Shipping Board, Emergency Fleet Corporation.*

1895	Charles H. Lincoln, . .	Detroit, Mich., .	Marine surveyor and inspector.	- -
1897	Alden H. Adams, . . .	Groton, Conn.,	First-class loftsmen.	Groton, Conn.
1901	Frank A. Browne, . . .	Westborough, .	General purchasing agent.	Philadelphia, Pa.
1911	Arthur McArdle, . . .	Sandwich, . .	Inspector, engineering.	Wilmington, Del.
1913	Arnold A. Laskey, . .	Oakland, Cal., .	Erecting engines,	Oakland, Cal.



*Instructors.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1900	Gershom Bradford, 2d. .	Millbrook, . .	Instructor in navigation.	United States Shipping Board, Boston.
1906	Howard G. Copeland, .	Wakefield, . .	Executive officer,	U. S. S. "Nantucket."
1907	Calvin N. Simonds, . .	Needham, . .	Assistant engineer.	U. S. S. "Nantucket."
1909	Ervin L. Kelley, . . .	Medford, . .	Chief engineer, .	U. S. S. "Nantucket."
1912	John W. Thompson, . .	Fairhaven, . .	Navigating officer,	U. S. S. "Nantucket."

*Enrolled in the United States Naval Reserve Force.*

1902	Fred C. Seibert, . . .	Greenfield, . .	Commander, . .	Receiving Ship, New York, N. Y.
1903	Harry M. Bostwick, . .	Provincetown, R. I.	Commander, . .	U. S. S. "Nephtune."
1906	William H. Lee, . . .	Medford, . .	Commander, . .	U. S. S. "Houston."
1908	Ernest F. Robinson, . .	Greenfield, N. H.	Commander, . .	U. S. S. "Patoka."
1896	James H. B. Meehan, .	Newport News, Va.	Lieutenant Commander.	U. S. S. "Proteus."
1900	E. Newton Parker, . .	Greenfield, . .	Lieutenant Commander.	U. S. S. "Kittery."
1901	Robert A. Patterson, . .	Cambridge, . .	Lieutenant Commander.	U. S. S. "Brazos."
1902	Arthur Jensen, . . . .	Provincetown, .	Lieutenant Commander.	U. S. S. "Comfort."
1905	Charles F. Tarr, . . . .	Taunton, . .	Lieutenant Commander.	U. S. S. "Houston."
1906	Bradford N. A. Gladding,	Norfolk, Va., .	Lieutenant Commander.	U. S. S. "Kana-awa."
1907	Harry L. Chick, . . . .	Beverly, . .	Lieutenant Commander.	N. O. T. S., Norfolk, Va.
1909	Eric E. Winquist, . . .	Mattapan, . .	Lieutenant Commander.	U. S. S. "Brazos."
1911	Frederic J. Shaw, . . . .	Boston, . . . .	Lieutenant Commander.	U. S. S. "Long Beach."
1912	William A. Hamilton, .	Portsmouth, Va.,	Lieutenant Commander.	U. S. S. "Patoka."
1907	Frederick M. Coughlan, .	No. Dartmouth,	Lieutenant, . .	Naval Hospital, Ft. Lyon, Col.
1907	Walter L. Smith, . . . .	Ashburnham, .	Lieutenant, . .	U. S. S. "Mt. Shasta."
1912	Clarence L. Howard, . .	Wellesley Farms,	Lieutenant, . .	Receiving Ship, New York, N. Y.
1914	Ten Eyck H. Reed, . . .	So. Framingham,	Lieutenant, . .	U. S. S. "Martha Washington."
1915	Leif H. Konrad, . . . .	Roslindale, . .	Lieutenant, . .	U. S. S. "Caesar."
1908	Harold Larner, . . . .	Cambridge, . .	Lieutenant (junior grade).	Navy Yard, Boston.
1911	William M. Gorham, . .	Belmont, . .	Lieutenant (junior grade).	U. S. S. "Proteus."
1915	Bernhardt Gerecke, . .	Boston, . . . .	Lieutenant (junior grade).	Mine Sweeping Detachment, Kirkwall, Scot.
1915	John Holmes, . . . .	Campello, . .	Lieutenant (junior grade).	U. S. S. "Lake Arthur."
1915	Martin F. Comeau, . .	Belmont, . .	Lieutenant (junior grade).	Aide on staff, naval force in European waters.
1901	Ernest E. Sackett, . .	Lynn, . . . .	Ensign, . . . .	U. S. S. "Orion."
1902	John E. Luby, . . . .	New Bedford, .	Ensign, . . . .	- - - - -1

*Enrolled in the United States Naval Reserve Force — Concluded.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1908	George H. Cameron, . .	Union, Me., .	Ensign, . . .	Naval Port Office, Bordeaux.
1911	Roy G. Whittemore, . .	Malden, . . .	Ensign, . . .	Sub-chaser 444.
1914	Richard S. Tewksbury, .	Winthrop, . .	Ensign, . . .	Receiving Ship, Hingham, Mass.
1917	Arthur D. Murphy, . .	Beverly, . . .	Ensign, . . .	U. S. S. "Henderson."
1918	Wesley C. Clark, . . .	Arlington Heights.	Ensign, . . .	U. S. S. "Galveston."
1906	Richard H. McKey, . .	Wonalancet, N. H.	- -	U. S. S. "Lamson."

*In the United States Navy.*

1898	Clarence E. Wood, . .	Tiverton, R. I.,	Commander, . .	U. S. S. "Panther."
1907	Thomas Baxter, . . .	South Dennis, .	Lieutenant Commander.	Bethlehem Shipbuilding Corporation, Quincy, Mass.
1896	Herbert E. Kershaw, . .	Lawrence, . . .	Lieutenant, . .	Navy Yard, Portsmouth, N. H.
1898	Herbert E. Fish, . . .	Charlestown, .	Lieutenant, . .	Quincy, Mass.
1899	Leroy Neil, . . . .	Lynn, . . . .	Lieutenant, . .	U. S. S. "Vestal."
1902	John F. Murphy, . . .	Worcester, . .	Lieutenant, . .	Naval Experimental Station, Annapolis, Md.
1904	Harold J. Dunne, . . .	Canton Junction.	Lieutenant (junior grade).	Submarine School, New London, Conn.
1906	C. Allan Holbrook, . .	Canton, . . .	Lieutenant (junior grade).	U. S. S. "MacKenzie."
1913	Oliver P. Shattuck, . .	West Acton, .	Lieutenant (junior grade).	U. S. S. "Crowninshield."
1906	William R. Dolan, . .	Worcester, . .	Ensign, . . . .	Naval Port Office, Cardiff, Wales.
1917	Philip G. Nichols, . .	Peabody, . . .	Midshipman, . .	U. S. Naval Academy.
1911	Jerome W. Hill, . . .	Chicopee, . . .	Chief gunner (radio).	U. S. S. "Brutus."
1904	C. George Dyson, . . .	No. Billerica, .	Gunner (T) (gyro),	U. S. S. "Camden."
1906	Carroll L. Morgan, . .	Beverly, . . .	Gunner (T), . .	Radio Station, Ensena, P. R.
1910	George F. Griswold, . .	Roslindale, . .	Gunner's mate, . .	U. S. S. "Chester."
1894	Philip Macomber, . . .	Allston, . . .	Chief boatswain's mate.	U. S. S. "Putnam."
1910	Russell H. Sullivan, . .	Westfield, . .	Pay clerk, . . .	U. S. S. "Geo. Washington."
1895	William J. Fitzgerald, .	So. Boston, . .	Supply officer, .	Navy Yard, Boston, Mass.

*Officers in the United States Marine Corps.*

1903	Leander A. Clapp, . .	Brockton, . . .	Major, . . . .	Army Service School, Ft. Leavenworth, Kan.
1906	Clarence E. Nutting, . .	Washington, D. C.	Major, . . . .	Paris Island, S. C.
1915	Edward R. Rhodes, . .	Lowell, . . . .	First lieutenant, .	Quantico, Va.



*Officers in the United States Coast Guard Service.*

Graduated.	NAME.	Residence.	Position.	Vessel or Service.
1895	Philip W. Lauriat, . .	Medford, . .	Captain, . . .	U. S. C. G. "Acushnet."
1899	James A. Alger, . . .	Reading, . .	Captain, . . .	Executive officer, U. S. C. G. Academy, New London, Conn.
1906	William F. Towle, . . .	Boston, . . .	Captain, . . .	Division Supervisor of Communications, New York, N. Y.
1896	Webb C. Maglathlin, . .	Bridgewater, .	Captain of engineers.	U. S. C. G. C. "Gresham," -
1897	Lorenzo C. Farwell, . .	Dorchester, .	Captain of engineers.	-
1897	Albert F. Patterson, . .	New York, N. Y.	Captain of engineers.	Mail Department, Third Naval District.
1906	Henry C. Roach, . . .	New Bedford, .	Captain of engineers.	U. S. C. G. A., New London, Conn.

*United States Steamboat Inspection Service.*

1902	Herman T. Parker, . . .	Rockport, . .	Inspector of hulls,	Boston, Mass.
1896	Alvin W. Haynes, . . .	Somerville, . .	Assistant inspector of hulls.	New York, N. Y.
1900	James S. Howes, . . .	Woods Hole, .	Assistant inspector of hulls.	Boston, Mass.
1909	William A. Sillars, . . .	Danvers, . . .	Assistant inspector of hulls.	Providence, R. I.
1899	Frank B. Davis, . . .	Dorchester, .	Assistant inspector of boilers.	New Orleans, La.
1900	James F. Rawdon, . . .	Worcester, . .	Assistant inspector of boilers.	Boston, Mass.

*Officers in the United States Lighthouse Service.*

1895	George E. Eaton, . . .	Woods Hole, .	Superintendent, .	Second Lighthouse District, Boston, Mass.
1904	John F. Williamson, . .	Brockton, . .	Captain, . . .	U. S. L. H. T. "Columbine,"
1905	Harry W. Maynard, . .	Milwaukee, Wis.,	Captain, . . .	U. S. L. H. T. "Hyacinth."

*In the Hydrographic Office, Navy Department.*

1897	Frederick W. Jones, . .	Winchester, . .	Nautical expert, .	Washington, D. C.
1913	George W. Sullivan, . .	Washington, D. C.	Nautical expert, .	Washington, D. C.

## APPROPRIATIONS.

The appropriations for the school for the fiscal year 1919, from Dec. 1, 1918, to Nov. 30, 1919, are here accounted for as follows: —

*Current Expenses.*

Appropriation, . . . . .	\$74,000 00	
Additional allowance for 1918 salary, . . . . .	12 83	
	<hr/>	\$74,012 83

## Expended: —

Pay roll, . . . . .	\$36,419 50	
Provisions, . . . . .	23,704 76	
Seamanship department, . . . . .	1,046 79	
Engineering department, . . . . .	6,420 18	
Instruction, . . . . .	1,559 33	
Miscellaneous, . . . . .	4,860 92	
Total amount expended, . . . . .	<hr/>	74,011 48

Balance unexpended, . . . . .		\$1 35
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*Office Expenses.*

	Office Expenses.	Personal Services.
Appropriations, . . . . .	\$2,700 00	\$3,600 00
Additional appropriation, . . . . .	—	64 87
Retirement fund allowance, . . . . .	3 24	—
	<hr/>	<hr/>
	\$2,703 24	\$3,664 87

## Expended: —

Salaries, . . . . .		3,660 87
Rent of office and janitor's service, \$1,105 00		
Printing, . . . . .	589 03	
Stationery and postage, . . . . .	401 95	
Telephone and telegrams, . . . . .	191 02	
Commissioners' expenses, . . . . .	79 53	
Miscellaneous, . . . . .	316 85	
	<hr/>	
	2,683 38	

Balance unexpended, . . . . .	\$19 86	\$4 00
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Respectfully submitted,

FRANCIS T. BOWLES, *Chairman.*  
WILLIAM E. McKAY.  
CLARENCE E. PERKINS.

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